

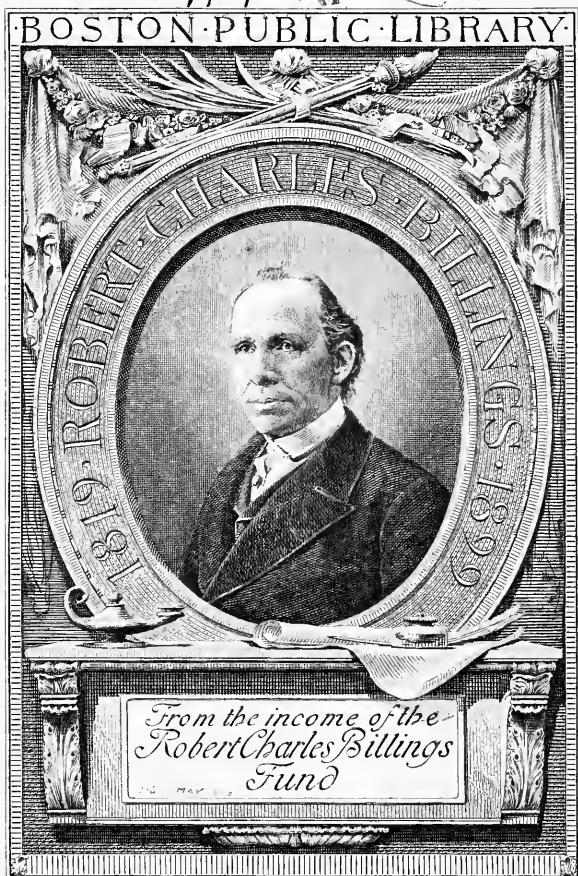
THE
DETECTION OF FORGERY.

A PRACTICAL HANDBOOK.

BY
DOUGLAS BLACKBURN
AND
CAPTAIN WAITHMAN CADDELL.






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Buckle. -     

Eye. - 1 v² y. (✓) (Ticked.)

Foot. - m h d l.

Hook. - ^{11/1} 1/2 ^{11/1} 1/2 ^{11/1} 1/2 ^{11/1} 1/2

Shank. - L P h. g.

Spur. - $\downarrow a \downarrow b \downarrow c.$

Toe. - $e^{\leftarrow} n^{\leftarrow} h^{\leftarrow}$

Whirl. - $b \leftarrow f \begin{matrix} \nearrow \\ \searrow \end{matrix} g$ $\begin{matrix} \nearrow \\ \searrow \end{matrix} M, H.$



THE

DETECTION OF FORGERY.

A PRACTICAL HANDBOOK

FOR THE USE OF

BANKERS, SOLICITORS, MAGISTRATES' CLERKS,

AND ALL HANDLING SUSPECTED DOCUMENTS.

BY

DOUGLAS BLACKBURN

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AND

CAPTAIN WAITHMAN CADDELL.

LONDON:

CHARLES & EDWIN LAYTON,

FARRINGDON STREET, E.C.

1909.

✓

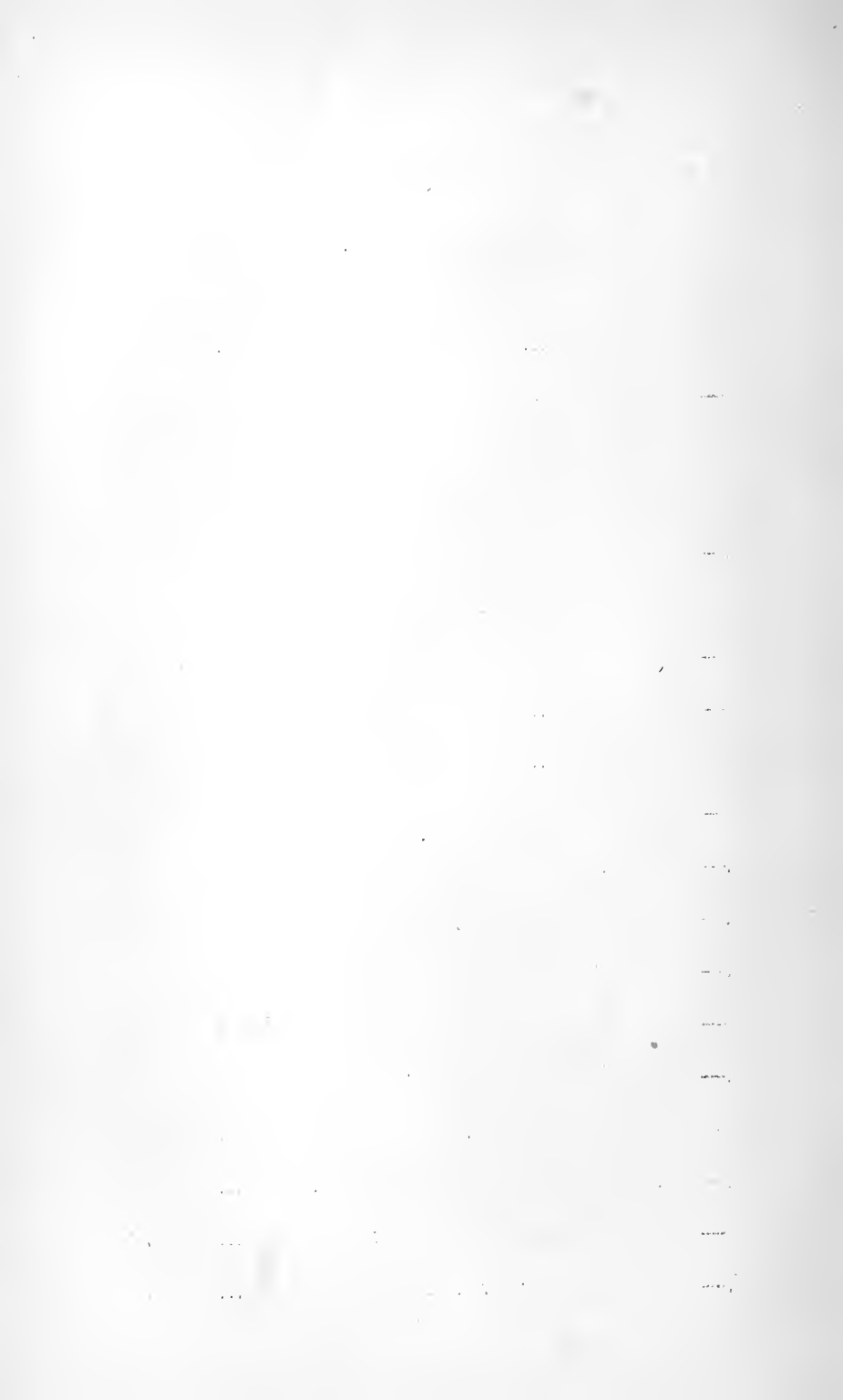


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INTRODUCTION.

THE object of this little work is to assist those who may occasionally be called upon to form an opinion as to the genuineness of signatures, alterations in cheques, and the varied doubtful documents that demand the serious consideration of business men by way of a preliminary to "taking further steps."

It is the first attempt published in England to explain the principles upon which the comparison and examination of handwriting are conducted by experts. It is, and can only be, an outline of suggestions how to begin, for no two experts follow precisely the same methods, any more than two painters work on the same lines. Both agree in recognising certain rules and general principles, but each strives for his objective point by the employment of those means which experience, temperament, taste and opportunity suggest. The study of the elementary rules of their art puts them upon the road for perfecting it, after which success can only be attained by rightly reading the signs that lead to the ultimate goal.

In reading these chapters the student should begin by practising that self-help which is essential to success. *He must read with pen and notebook.* It is with the object of compelling this valuable habit that no illustrative examples are given in the text. It would have been easy to fill many pages with script illustrations, but experience shows that a much greater impression is made upon the memory by the hand forming the outlines described than if they were provided in pictorial form. In other words, the student should supply this purposeful omission by himself constructing the illustrations from the description. The

trifling extra time and trouble thus demanded will be amply repaid by the ease and rapidity with which the various points will be fixed in the memory. Nor is this the only advantage to be gained. The act of reproducing the illustration cited will emphasise and render clear technical and mechanical features that would require many words to explain, with the attendant risk of confusing the mind by mere verbiage.

The material and opportunity for practising and studying the comparison of handwritings are abundant. Every letter written or read affords a subject, and in a surprisingly short space of time the student will find himself instinctively noting and analysing peculiarities in handwriting that probably never arrested his attention before. The principles of the art are exceedingly simple and free from complexity, and many a person who takes up the study will find that he possesses powers of analysis and observation unguessed before. The most successful expert is he who observes most closely and accurately, and the faculty needs only the spur of an objective point for it to be developed.

After a little practice, experience will suggest many methods of examination and test not dealt with here. For example, photographic enlargements can be and are utilised with great advantage by bringing out minute details, especially in signatures, erasures and alterations. Interesting experiments can be made with a view to discovering the effect of different kinds of ink—important in settling the question whether the whole of a particular writing was done with one fluid, and at the same time, or at intervals.

The study of erasures and alterations of figures or characters also comes within the scope of developments of the art which it is not deemed necessary to deal with at length in these pages, for after experience will suggest their use and the best methods of procedure. For the beginner the instructions given in the chapters that follow will be found amply sufficient to direct him how to take up a fascinating and practical accomplishment, and this, with no further aid than his own judgment, perseverance and powers of observation and deduction.

CHAPTER I.

THE PRINCIPLES OF HANDWRITING ANALYSIS.

THE principle on which experts claim to be able to detect variations and to differentiate between handwritings is based on the well-established axiom that there is no such thing as a perfect pair in nature; that, however close the apparent similarity between two things, a careful examination and comparison will reveal marked differences to those trained to detect them.

This is especially true of everything that is produced by human agency. Everyone knows how difficult it is to keep check upon and eradicate certain physical habits, such as gestures, style of walking, moving the hands, arms, &c., tricks of speech, or tone of voice. These mannerisms, being mechanical and automatic, or the result of long habit, are performed unconsciously, and there is probably no person who is entirely free from some marked peculiarity of manner, which he is ignorant of possessing. It is a well-known fact that the subject of caricature or mimicry rarely admits the accuracy or justness of the imitation, although the peculiarities so emphasised are plainly apparent to others. Even actors, who are supposed to make a careful study of their every tone and gesture, are constantly criticised for faults or mannerisms plain to the observer, but undetected by themselves.

It is easy, therefore, to understand how a trick or a gesture may become a fixed and unconscious habit through long custom, especially when, as in the case of a peculiarity of style in handwriting, there has been neither criticism on it, nor special reason for abandoning it.

Every person whose handwriting is developed and permanently formed has adopted certain more or less distinctive

peculiarities in the formation of letters of which he is generally unaware.

The act of writing is much less a matter of control than may be supposed. The pen follows the thoughts mechanically, and few ready and habitual writers could, if suddenly called upon to do so, say what peculiarities their writing possessed. For example, how many could say offhand how they dotted an *i*—whether with a round dot, a tick or a dash—whether the tick was vertical, horizontal or sloping; what was the proportional distance of the dot from the top of the *i*. Again, ask a practised writer how he crosses the letter *t*—whether with a horizontal, up or down stroke? It is safe to assume that not one in a thousand could give an accurate answer, for the reason that the dotting of an *i* and crossing of a *t* have become mechanical acts, done without thought or premeditation, but as the result of a long-formed habit.

It is these unconscious hand-gestures and mechanical tricks of style that the handwriting expert learns to distinguish and recognise,—the unconsidered trifles that the writer has probably never devoted a minute's thought to, and which come upon him as a surprise when they are pointed out to him. Their detection is rendered the more easy when one knows what to look for from the fact that they are, unlike gestures and tricks of voice, permanent. A mannerism may not strike two observers in the same way, nor is it easy to compare, for it is fleeting, and the memory has to be relied upon to recall a former gesture in order to compare it with the last. It is not so with a hand-gesture in writing. The sign remains side by side with its repetition, for careful and deliberate comparison; and if the writing be a long one, the expert has the advantage of being in possession of ample material on which to base his judgment.

A Popular Fallacy.—One of the most frequent objections offered by the casual critic when the subject of expert testimony is discussed is to the effect that people write different hands with different pens, and he probably believes this to be true. A very slight acquaintance with the principles on which the expert works would satisfy this spontaneous critic of the fallacy of his objection. A person who habitually writes a fine, small hand, sloping from right

to left, may believe that he has altered the character of his hand by using a thick, soft quill, reversing the slope to what is called a backhand, and doubling the size of the letters. All he has done is to put on a different suit of clothes; the same man is in them. The use of a thick pen does not make him put a dot over the *i* where before he made an horizontal dash; it does not turn a straight, barred *t* into a curved loop, neither does it alter the proportionate distance between the letters and lines. It does not make him form loops where before he habitually made bars, or *vice versa*, and if he formerly made a *u* with an angle like a *v* he will not write the *u* with a rounded hook. Neither will it cause him to drop his habit of adding a spur to his initial letters or curtail the ends and tails that he was wont to make long. In short, the points to which the expert devotes his investigation are those least affected by any variation in the character of the pen used and the hand-gestures which have, by constant usage, become as much part of the writer's style as his walk and the tone of his voice.

It follows, therefore, that the work of the handwriting experts consists in learning how to detect and recognize those unconscious or mechanical signs, characteristics or hand-gestures that are a feature in the handwriting of every person, no matter how closely any two hands may approximate in general appearance. However similar two hands may seem to the casual and untrained observer, very distinct and unmistakable differences become apparent when the student has been taught what to look for. There is no more certain thing than the fact that there has not yet been discovered two handwritings by separate persons so closely allied that a difference cannot be detected by the trained observer. Every schoolmaster knows that in a class of pupils taught writing from the same model, and kept strictly to it, no two hands are alike, although in the early and rudimentary stage, before the hand has attained freedom and approached a settled character, the differences are less marked. So soon as the child has been freed from the restraint of the set copy and the criticism of the teacher, he begins to manifest distinct characteristics, which become more marked and fixed with practice and usage.

There is no writing so uniform as the regulation hand used, and wisely insisted upon, in the Civil Service, and familiar to the general public in telegrams and official letters. Yet it is safe to say that there is not a telegraph or post office clerk in England who would not be able to pick out the writing of any colleague with which he was at all acquainted.

Duplicates non-existent.—But the best and most decisive answer to the objection that writings may be exactly similar lies in the notorious fact that during half a century experts have failed to discover two complete writings by different hands, so much alike that a difference could not be detected. Had such existed, they would long ere this have been produced for the confuting of the expert in the witness-box; particularly when we bear in mind that the liberty, and even the life of a person, have depended upon the identification of handwriting. That there are many cases of extraordinary similarity between different handwritings is a fact; if there were not, there would be very little occasion for the services of the expert, but it is equally a fact that the fancied resemblance becomes less apparent as soon as the writing is examined by a capable and painstaking expert. It should not be forgotten that it is not every person who undertakes the comparison of handwritings who is qualified for the task, any more than every doctor who diagnoses a case can be depended upon to arrive at an accurate conclusion. But if the tried and accepted principles of the art be acted upon, there should be no possibility of error, always assuming that the person undertaking the examination has a sufficiency of material for comparison. An expert who valued his reputation would, for example, be very cautious about giving an emphatic opinion if the only material at his disposal were two or three words or letters. It is quite possible that a clever mimic might reproduce the voice of another person so accurately as to deceive those who knew the subject of the imitation; but let him carry on a conversation in the assumed voice for a few minutes, and detection is certain. In like manner, while a few characters and tricks of style in writing may be fairly well imitated, it is impossible to carry the deception over a number of words. Sooner or later the forger lapses into some trick of his own, and it is here

the trained observer catches him. The expert, like the caricaturist, lays himself out to note the peculiarities of his subject, knowing that these are practically beyond the control of the writer, and that the probabilities are that he is not even aware of them. Peculiarities in handwriting, like unchecked habits in children, become, in time, crystallised into a mannerism so fixed as to be part of the nature, and consequently are difficult of eradication. As a matter of fact a peculiarity in handwriting is more often cultivated than controlled, many writers regarding a departure from orthodox copybook form as an evidence of an "educated hand."

The Law of Probabilities.—In examining a writing for comparison with another the expert notes all peculiarities, which he labels, for distinctive reference, "tricks." When he has recorded as many as possible he looks for them in the writing which he has to compare. Suppose that he has taken note of a dozen tricks, and finds them all repeated in the suspected writing. The law of probabilities points to a common authorship for both writings, for it is asking too much to expect one to believe that there should exist two different persons, probably strangers, who possess precisely the same peculiarities in penmanship.

This principle of the law of probabilities is applied in the case of the identification of persons "wanted" by the police. For example, the official description of an absconding forger runs as follows:—"He has a habit of rubbing his right thumb against the middle finger as if turning a ring. He frequently strokes his right eyebrow with right forefinger when engaged in writing; when perplexed, he bites his lower lip and clenches and unclenches his fingers."

Now there are, probably, thousands of people who do every one of these things singly, but the chances are millions to one against there being two people who do them all as described in the official placard. In like manner there may be a multitude of writers who form an *f* or *k* with a peculiar exaggerated buckle. Thousands more may make certain letters in the same way, but to assume that there are two persons who possess equally the whole twelve characteristics noted by the expert is to strain coincidence to the breaking-point of absurdity.

Therefore, it follows that it is the weight of cumulative evidence of similarity in the production of unusual tricks of style that proclaims a common authorship for two apparently different writings.

It may be, and often is, the case that the peculiarities or tricks in the original have been imitated in the suspected writing. As the result of his experience in knowing what to look for in a copied document, the expert is not deceived. However good the copy, there are always apparent to the trained eye evidences that prove another and stranger hand, plain as the difference between the firm, clear line of the drawing master and the broken saw-edged effort of the pupil. Habitual observation trains the eye to an extent that would scarcely be credited unless proved by experiment. The art of observation cannot be taught; it must be the outcome of practice. The most the teacher can do is to indicate the lines on which the study should be carried out, and offer hints and suggestions as to what to look for. The rest is in the hands of the student.

CHAPTER II.

MEASUREMENT AND ITS APPLIANCES.

THE appliances necessary for the work of examination are, a good magnifying or reading glass of the greatest power obtainable, a pair of fine compasses or dividers, a horn or celluloid protractor for measuring angles of slope, and a clearly marked scale rule. Suitable articles will generally be found in an ordinary case of mathematical instruments.

A simpler and equally accurate method of taking measurements of handwriting is by the aid of the transparent paper known as foreign letter paper. It is usually of quarto size, very thin and transparent, and is ruled horizontally and vertically, dividing the sheet into tiny squares. It is laid over the writing to be examined, and the various measurement marks are made with a finely pointed lead pencil. The lines and squares are used for measurement as the parallels of latitude and longitude are used on a chart. For example, a letter is said to be so many lines high, so many lines wide. One of the tiny squares should be carefully divided into two, or, if possible, four parts, so as to ensure finer and more accurate measurement. A letter may then be measured in parts of a line, being described, for example, as, height $6\frac{3}{4}$ lines, breadth $2\frac{1}{2}$ lines. It is of course important that the same gauge of ruled paper be used uniformly, otherwise the measurements will vary. If the student has had practice in the use of the dividers and scale rule, he may prefer to employ these, but the ruled paper and a finely pointed lead pencil will be found sufficient for most purposes. A paper specially prepared for surveyors, ruled in squares of one-eighth of an inch may be obtained. For measuring the slopes of letters a transparent protractor is necessary. The letters measured are all topped and tailed small letters, and

all capitals having a shank. Letters like *O*, *C*, *Q*, *S*, and *X* can only be measured approximately.

The method of applying the measurements of heights and angles of slope is shown in the case illustrated by the table on page 15.

The subject of enquiry was a signature containing the letters *B*, *l*, *k*, *b*.

The measurements of these letters in the forgery are given at the top of the table, and show the height in lines and angle of slope in degrees.

The measurements of the corresponding letters in twelve genuine signatures are shown in the table as Examples 1 to 12.

The total is averaged by dividing by twelve.

The presumption in favour of the suspected signature being a forgery is strongly supported by the arithmetical result.

A difference of more than 2 per cent. in angle of slope, and 3 per cent. in height may be safely relied upon as ground for suspicion, for it is rarely that a man's signature varies so greatly within a brief period. In the absence of the explanation provided by illness, intentional change in style or other abnormal circumstances, such a difference as is shown in this example will justify a belief that the suspected signature is by another hand.

	Height in lines.				Angle of slope.			
	<i>B.</i>	<i>l.</i>	<i>k.</i>	<i>b.</i>	<i>B.</i>	<i>l.</i>	<i>k.</i>	<i>b.</i>
Forgery ...	7	7	6	$7\frac{1}{4}$	15	20	21	21
Example 1	$7\frac{1}{4}$	$6\frac{1}{2}$	$5\frac{1}{2}$	$7\frac{1}{2}$	16	22	21	20
„ 2	$7\frac{1}{2}$	$6\frac{1}{4}$	6	$7\frac{1}{4}$	17	21	20	20
„ 3	$7\frac{1}{4}$	6	$5\frac{3}{4}$	$7\frac{3}{4}$	16	21	20	21
„ 4	7	$6\frac{1}{4}$	$5\frac{3}{4}$	$7\frac{1}{2}$	16	21	20	21
„ 5	7	$6\frac{3}{4}$	$5\frac{3}{4}$	$7\frac{1}{2}$	17	22	21	20
„ 6	$7\frac{1}{2}$	$6\frac{3}{4}$	5	$7\frac{1}{2}$	16	21	20	21
„ 7	$7\frac{1}{2}$	6	6	$7\frac{1}{4}$	17	20	21	21
„ 8	$7\frac{1}{2}$	$6\frac{1}{2}$	$5\frac{3}{4}$	$7\frac{1}{2}$	16	22	21	21
„ 9	$7\frac{1}{4}$	$6\frac{1}{2}$	$5\frac{1}{2}$	7	16	21	21	21
„ 10	$6\frac{3}{4}$	$6\frac{1}{2}$	$5\frac{3}{4}$	$7\frac{1}{4}$	16	20	21	21
„ 11	$7\frac{1}{4}$	$6\frac{3}{4}$	$5\frac{3}{4}$	$7\frac{1}{2}$	16	21	21	22
„ 12	7	$6\frac{1}{4}$	$5\frac{3}{4}$	$7\frac{1}{2}$	16	20	21	21
Average ...	7	$6\frac{1}{4}$	6	$7\frac{1}{4}$	16	21	20	20



CHAPTER III.

TERMINOLOGY.

IN order to render the description of a writing perfectly clear, a system of terminology is adopted which is invariable. That is, the same terms are always employed in indicating the same parts of a letter. These are simple, and for the most part self-explanatory, so that no effort is required to commit them to memory.

Every part of a letter has a distinctive name, so that it would be possible to reproduce a script character very closely by a verbal description.

The following are the terms used in describing a letter:—

Letter means the whole of any script character, capital or small. For the sake of brevity in notes and reports capital is written Cp.; small, Sm.

Arc.—An arc is the curve formed *inside* the top loop or curve, as in *f*, *m*, *h*, *o*. In *o*, the inside top half of the letter is the arc; the inside bottom half is the hook.

Buckle.—The buckle is the separate stroke added to such letters as *k*, *f*, and capitals *A*, *F*, *H*.

Beard.—The beard is the preliminary stroke that often appears in capital letters.

Body.—The body of a letter is that portion of it which rests on the line and could be contained in a small circle. For example, in a small *d* the body consists of the circle and the final upward curve or toe. In a small *g* the body is the circle minus the tail.

Eye is the small circle formed by the continuation of a stroke as in the shoulder *r*.

Finals.—A final is the finishing stroke not carried beyond the shank in capitals, and in a few smalls like *y*, *g*, *z*.

Foot.—The foot of a letter is that portion of it that rests on the line. Small *m* has three feet, *h* has two, etc.

Hook.—The hook is the inside of a bottom curve. It is the opposite of the arc.

Link.—The link is that portion of the stroke which connects two letters.

Broken link.—A broken link is a disconnection in the link joining two letters.

Loop.—A loop is that portion of a letter which forms the top or tail. Unlooped tops and tails are called “barred.” For example, small *f* has two loops, top and bottom; *f*, *h*, *l* have one top loop; *g*, *y*, *z* have one bottom loop.

Shank.—The shank of a letter is the principal long downstroke that forms the backbone.

Shoulder.—The shoulder is the outside of the top of the curve as seen in small *m*, *n*, *o*, *h*. Small *m* has three shoulders, *n* two, *h* one.

Spur.—The spur is to the small letter what the beard is to the capital. It is the initial stroke.

Tick.—A tick is a small stroke generally at the beginning of a letter, sometimes at the end.

Toe.—The toe is the concluding upward stroke of a letter, as seen in small *e*, *n*, *h*, &c.

Whirl.—The whirl is the upstroke in all looped letters. It is a continuation of the spur in *b*, *h*, *f*, *l*, and is always an upstroke.

CHAPTER IV.

CLASSES OF HANDWRITING.

FOR convenience in differentiation, handwritings are divided into the following classes. Practically every type of writing can be placed in one of them.

Vertical Hand.—A vertical hand is one in which the tops and tails of letters form as nearly as possible a perpendicular with the horizontal line. The best example of this class of handwriting is that known as the Civil Service hand, familiar to the general public through telegrams and official documents.

Back Hand is a hand in which the general slope of the characters is from right to left.

Italian Hand is the reverse of a back hand, the slope being at an acute angle from left to right. It is a style fast going out of fashion, and is almost invariably the handwriting used by elderly ladies. Its most pronounced characteristic is its sharp angles and absence of curves.

Open Hand.—An open hand is one that generally approximates to the vertical, its distinguishing feature being the wide space between the letters. The best example of it is that known as the Cusack style of writing.

Closed Hand.—A closed hand is the opposite of an open hand, the letters being crowded together and generally long and narrow, with the slope from left to right.

Greek Hand.—This is the name given to a type of writing that closely approximates to the printed character. Many letters, both capital and small, are formed to imitate print, particularly the capitals *T, X, Y, R, B, D*, and the smalls *e, f, g, h, j, k, p, r, t, v, w, x, y, z*. It is a hand frequently found in the writings of classical scholars, literary men engaged in work entailing careful research, and often is an evidence of short sight.

The *Wavy Hand* is generally vertical. Its characteristic is an undulating serpentine waviness. Little or no distinction is made between barred or looped letters. There are no rounded shoulders to the *m* and *n* and the word minnie would be written by five small *u*'s. In round-bodied letters like *a*, *d*, *g*, the circle is rarely completed, but is left open, so that small *a* becomes *u*, and small *d* may be mistaken for *it*, with the *i* undotted and *t* uncrossed. Despite its geometrical and caligraphic inaccuracy in detail, this hand is generally written with great regularity, that is, the characters, though incomplete, are always uniform in their irregularity. The *e* is never open, but is an undotted *i*, and *n* is *u*, but when the peculiarities of the writer become familiar this hand is often very legible.

Flat Hand.—A flat hand is a type of handwriting in which the characters have an oblate or flattened appearance, the *o*, *a*, *g*, &c., being horizontal ovals, like the minim and breve in music. The tails and tops are generally short, with wide loops. It is nearly always a vertical hand.

An *Eccentric Hand* is one that presents various marked peculiarities and departures from standard rules in the formation of certain letters, and cannot be placed in any recognised class, though it may approximate to one more than to another.

The *Round* or *Clerical Hand* is a writing that preserves a close affinity for the round regular hand of the average school-boy, with the difference that while the characters are formed on regular copybook model, the hand is written with considerable fluency and firmness. It is generally only a little out of the perpendicular, sloping slightly towards the right.

CHAPTER V.

HOW TO EXAMINE A WRITING.

THE examination of a writing generally consists in making a careful comparison between it and another or others, the object being to determine whether all are by the same hand.

The writing which is in a known hand or as to the authorship of which there is no doubt, is usually called the Original, and is always referred to by this name. The writing which has to be compared with it, and which practically forms the subject of the enquiry, is called the Suspect. The Suspects should be marked A, B, C, D, &c., and put away without examination until the Original has been thoroughly mastered. This is more important than may appear at first sight, for the confusing effect of having the two types of writing in the eye and mind before one type is made familiar is highly prejudicial. Any inclination to look at the Suspects first should be firmly resisted.

Let us assume that the object of the examination is to discover the writer of an anonymous letter—one of the most frequent tasks of the handwriting expert. The material in hand is the anonymous letter, which in such a case may be called the Original, and half-a-dozen specimens of the writing of suspected persons. These Suspects are numbered from 1 to 6, or marked A, B, C, &c., and put aside until the Original has been thoroughly studied.

The first thing is to examine the paper and envelope, noting its quality, watermark, size, and any feature that may afford a clue. It is always safe to presume that the paper is in every respect unlike that commonly used by the writer, just as it is equally safe to take it for granted that the writing it contains will, so far as its general appearance goes, be the reverse of the normal hand of the author. That is, if it

be a heavy back hand, the writer probably uses a hand approximating to the Italian, though too much weight must not be attached to this theory.

Next, note the general style of the document as a whole, whether the margin between top, bottom, and sides is large or small. A writer who habitually begins at the top left hand corner very near to the edge of the paper will often betray himself by repeating the habit. It is a very common sign of an economical disposition. Note whether he crowds his words and letters near the ends of lines or leaves a good margin. Clerks and those engaged in official work rarely crowd their final words, preferring rather to leave a wide space and go on to the next line.

Note whether the hyphen is used to divide words. Many writers never divide a word, others do it frequently, with or without the hyphen.

Measure the average distance between lines, if unruled paper be used, and make a note of the average distance.

Measure the distance between words and strike an average, noting if words are connected without lifting the pen. It may be found that this joining is only done when certain letters form the final of the first word joined and the initial of the word connected. Look carefully for such.

Note particularly the slope of the topped and tailed letters.

Note the punctuation, whether frequent and accurate or otherwise.

Determine the class to which the writing belongs.

Read the document carefully, noting any peculiarities of language, errors, or Americanisms in spelling, such as "favor" for "favour," "color" for "colour," &c.; the substitution of "z" for "s" in such words as "advertise," &c. Examine with the glass any words that may have been crossed out or rewritten, noting particularly letters that have been mended or touched up.

Note whether the horizontal lines have a tendency to slope up or down.

Note particularly letters with two or more feet, like *a*, *d*, *h*, *k*, *m*, *n*, &c. It will be found that a certain regularity in formation exists in most writings. If the *a* be formed like

an *o*, the toe not touching the line, or an *n* with the second foot high up like a bearded *r*, these peculiarities should be carefully noted. Some writers go to the other extreme, and carry the second foot below the line, so that *a* becomes a small *q*. Too much time cannot be devoted to this aspect of handwriting, as it presents features of which the writer is probably quite unconscious, and, therefore, affords valuable evidence.

Next study the topped and tailed letters, noting whether they are looped or barred, that is, formed by a single stroke. It will be often found that certain letters are always looped, others barred. Take careful note of such. If both barred and looped letters appear to be used indiscriminately, count and average them. In any case, a characteristic will be revealed. Examine and classify the loops. Note whether they are long or short, rounded or angular, wide or narrow. Devote special attention to the arc, shoulder and hook. Note, also, any difference of thickness between the up and down stroke; test the degree of clearness and sharpness of stroke by means of the glass, and carefully look for the serrated or ragged edge, which will assist in determining the angle at which the pen is held.

CHAPTER VI.

THE ALPHABET IN DETAIL.

IF the instructions so far given have been acted upon, the student will have familiarised himself with the general character of the writing under examination. He should now proceed with a detailed examination of each letter, beginning with the smalls, and taking them in alphabetical order.

Take a sheet of tracing paper and trace each small *a*, letting them follow each other on the line, with about a quarter inch of space between each letter. During the process of tracing, the eye must be on the alert for peculiarities, notably the roundness or otherwise of the circle as a whole, the curve or angle of the arc and hook, the relative position of the toe. Note the shank, whether looped or barred, whether the top of it is above or below the body of the circle, whether it is vertical or sloping from right or left. Having compared all the *a*'s, count them, and decide which form most frequently recurs. This may be taken as the normal *a* of the writer.

The following are the principal points to be considered in examining succeeding letters.

b.—Note the spur, its length, how far up the shank it meets it; whether the shank is barred or looped; the character of the loop. Note particularly the toe, which also forms the link. This is a very significant hand-gesture. It may be low down, making the *b* literally *li*, or it may be a horizontal bar, an angle, or a neat semicircle. Its formation offers large scope for variation, and should be very carefully studied. Compare the toe with the corresponding stroke in *f*, *o*, *v*, *w*. Note whether it is joined with an eye, and observe its average distance from the bottom on base line.

c.—This letter, when an initial, is frequently begun with a spur, often with a dot or tick. When connected with a

preceding letter, the link may make the *c* into an *e*. It is sometimes disconnected from the preceding letter. Note whether this is characteristic.

d.—Apply the same tests as in examining small *a*, noting whether the shank is barred or looped.

e.—Examine the spur in initials; closely observe the loop. Look for any recurrence of the Greek *ε*. Examine and compare the specimens given in the examples. Many writers have a habit of forming an *e* as an *i* and adding the loop. Look out for this with assistance of the glass.

f.—This is an important letter, giving scope for numerous varieties of form. Examine and classify the loops, noting which is the longer—the top or bottom; whether one or both are barred. The eye and toe are pregnant with material for observation. Examine the various forms of this letter given in the examples.

g.—Like the preceding letter, this one has many varieties of form, and will repay careful study.

h.—The characteristic portion of this letter is the hook forming its body. Note how it is joined to the shank—whether it starts from the line or high up; whether the shoulder is rounded or angular, whether the foot touches the line or remains above it; whether the shank is looped or barred.

i.—This is an important letter because of the dot, which is made mechanically. After noting whether the shank is spurred as an initial, special attention must be devoted to the dot. Dots are of various forms. They may be a wedge-shaped stroke sloping in any direction, a horizontal dash, a tiny circle or semi-circle, a small *v*, or a perfect dot. Examine them all through the glass, and compare them with the comma, which often partakes of the same character as the dot. Note also its relative position to the shank, whether vertical, to the right or left, and its average height and distance from the shank. Much may be learned from a careful examination of the dot, and its every variation and characteristic should be most carefully noted and classified.

j is important for the same reason that makes the *i* significant. There are several forms of it, but the dotting offers the most valuable evidence.

k.—This is the most significant and valuable of the small letters, as it offers scope for so much originality and irregularity in its formation. The characteristic features of the small *k* lie mainly in the body. Few writers form a *k* alike. Although it may belong to the same class, the number of variations that can be rung on the body is surprisingly large, ranging from the regulation copybook model to the eccentric patterns shown in the examples. Special attention should be devoted to the eye and buckle, for it is at this junction of the two strokes forming the body that most writers exhibit their peculiarities.

l.—The same principles of examination apply to this letter as to the small *e*. Note carefully the character of the loop and examine the position of the spur.

m and *n* offer ample material for examination. As an initial the first stroke is sometimes exaggerated, approximating the letter to the capital *M* or *N*. Note the formation of the shoulders and their relative heights and width; also, by means of a line touching the tops of the shoulders, note carefully and compare the last shoulder with the first. This letter presents great extremes in formation. The shoulders may be high and well rounded, or even horizontal, or they may be sharp angles, turning the *m* into *in*, and the *n* into *u*. Note the distance between the shanks and observe whether it is uniform.

o.—This letter owes its main importance to its connecting link. Note whether it is carried low down, making the letter like an *a*, whether it is joined to the body by an eye, and if the toe is curved or angular. Note, also, the general conformation of the circular body and compare the toe with that in *b*, *f*, *v*, and *w*.

p.—There are several forms of this letter, and a writer who affects one of them generally repeats it often. The shank may be barred or looped, wholly or in part, especially when used as an initial. The body generally offers ample material for examination.

q is also a letter with which great liberties are taken, and is the subject of several variations. Some writers make no distinction between *g* and *q*, and the final stroke often supplies the main characteristic of this letter.

r.—This important letter has two forms—the square, or eyed, and the hooked. Many variants are employed in forming it, as the specimens in the examples show. Many writers unconsciously form a habit of using both *r*'s, but with a certain degree of system. For example, one may use the hook *r* always as a final, and the eyed *r* as an initial. The formation of the eye should be specially studied, with the shoulder, which may be formed as a semicircle, an arc, a straight bar or an angular *v*. The hooked *r* is equally rich in varying forms, and the letter forms an interesting study.

s.—This is a letter of such frequent recurrence in the English language that it not unnaturally has become the subject of a variety of forms, and this despite the fact that its regulation shape is exceedingly simple and rudimentary. The majority of writers have one favourite form of the letter, which, like the *k*, becomes characteristic.

t.—This letter is important because of its frequent recurrence, and on account of the variations of form, the bar or crossing being the most fruitful in material for observation. There are two usual forms of the *t*, the hooked and crossed, and the barred, and they are equally valuable and characteristic. The crossing of a hooked *t*, like the dotting of an *i*, is so mechanical an act that it often reveals important evidence. The cross stroke when closely examined will be found to present many variations. It may be a fine horizontal line, a curve, a heavy short dash; it may be ticked or dotted at either end or both—in short, there is scarcely an end to the numerous forms this important hand-gesture may assume. Then its relative position to the shank tells much. It may be high up, not touching the shank; low down, neatly struck at right angles to the shank, or it may be omitted altogether. In some circumstances a *t* is crossed, in others left uncrossed; for example, the *t* at the beginning of a word may be invariably uncrossed, but the final *t* never. These are the peculiarities and characteristics the student has to keep a watchful eye for. The other form of the *t* is known as the bar *t*. It is generally uncrossed, and often the buckle is an important feature. A careful examination of the examples will suggest the lines on which the analysis of the

letter *t* should be conducted and at the same time reveal the richness of material at the disposal of the student.

u.—Note whether the two shanks are uniform, whether the letter is spurred as an initial. Average the distance between the shanks, and observe the conformation of the hook, whether rounded or *v* shaped.

v.—The important feature of this letter is the toe. Its formation must be carefully noted as in *f*, *o*, hooked *r* and *w*.

w.—Apply the same test as to *u* and *v*. Note the uniformity or otherwise of the shanks and hooks, and study the varied forms given in the examples.

x.—This letter lends itself to tricks and variations, and few letters depart more from the orthodox copybook form in actual practice, as is shown in the examples.

y.—Note the spur and its relative position to the shank. Note the tail and its average length.

z.—This letter offers good material for study and the detection of mannerisms. Its body is the most significant part, as it is capable of so many variations. It may be angular or well curved; the eye may be large or exaggerated or merely suggested. Like *k* and *x*, the form once adopted by a writer is not usually departed from to any great extent.

ALPHABET VARIANTS.

A. a d a a B. b b b b
 C. c c c c D. d d d d d
 E. e e b b e F. f f f f f
 G. g g g g H. h h h h h
 I. i i i i i K. k k k k k
 M. m, n, u, w, x, y, z.
 O. o o o o o P. p p p p p
 Q. q q q q q.
 R. r r r r r r x l z n x
 S. s s s s s T. t t t t t
 U. u u u u u V. v v v v v
 W. w w w w w x
 X. x x x x x x x x
 Y. y y y y y y.

CHAPTER VII.

THE CAPITALS.

OWING to their large size and more complex form the capital letters offer much more material for tests than the smalls. They yield more scope for tricks and eccentricity, though, at the same time, their extra prominence, and the clearness with which their outlines strike the eye of the writer render it more likely that he will detect glaring departures from the orthodox model. In other words, a writer would probably pay more attention to accuracy in forming, and particularly in copying, a capital than a small letter. This is generally found to be the case in signature forgeries, the capitals being, as a rule, much nearer the original than the small letters. But there is this great advantage in favour of the student in examining capitals—the strokes being more expansive supply a larger field and material for examination. For example, a ragged or diamond stroke in a much flourished capital like *M*, *W*, *R* or *B* would be more apparent than the same kind of stroke in a small letter.

There is no need to take the capital letters seriatim, as was the case with the smalls, for the same principles and rules for examination apply in both cases. The same care is necessary in examining the arcs, hooks and shoulders of loops, with their general conformation. The angle of slope is more noticeable in capitals, and they reveal the characteristics of the writer more than small letters. Persons who profess to delineate character from handwriting always pay great attention to the capitals, doubtless with good reason, and as the result of long experience.

An examination will show that about ten capitals can be formed with two disconnected strokes. They are *A*, *B*, *F*, *H*, *K*, *P*, *Q*, *R*, *T* and *X*. These are known as double capitals.

These doubles should be carefully looked for, and the frequency, or otherwise, of their recurrence noted, as it is probable they will be found to be nearly always used under the same circumstances; that is, a writer may have a habit of beginning with a double capital when possible, but revert to the single form of the same letter in the body of the writing. Another writer will almost invariably disconnect the capitals from the rest of the word, while a third as regularly connects them. Some writers affect the more simple form, approximating to the printed character. Others again indulge in inordinate flourishes, particularly in their signatures. Such writers prove easy prey to the forger.

A feature very easy of detection in capitals is the "diamond." It is formed by a sudden thickening of the downstroke. It is particularly noticeable in the writing of those who have been instructed in the old-fashioned school, where a distinction between the heavy downstroke and the light upstroke was insisted upon. The diamond habit once formed is very difficult to eradicate, and traces of it always remain in the writing of persons thus taught.

An important and significant part of a capital letter is the beard. It is an automatic trick, and always repays careful examination. It may be a spurred, ticked or dotted beard, but in any case the initial stroke must be carefully examined, whatever form it may assume, for the oft-emphasized reason that it belongs so essentially to the clue-providing class of unguarded and unpremeditated automatic strokes that are overlooked by the writer.

Variations in the form of a capital must be noted, and a record kept, for, however great the variety, it will be found that one particular form is more used than another, and may be regarded as the normal type of the writer.

A peculiarity of some writers is the use of an enlarged form of the small letter for a capital. The letters so made to serve a double purpose are generally *A*, *C*, *E*, *G*, *M*, *N*, *O*, *P*, *Q*, *S*, *U*, *V* and *W*. They are referred to as small capitals.

CHAPTER VIII.

PUNCTUATION.

THE ampersand (&) is a symbol that provides excellent material for clues to tricks and mannerisms. It varies in form from a mere *v*-shaped tick of almost indeterminate character to an ornate thing of loops and flourishes. It is very sparingly employed by illiterate persons, and some educated writers avoid its use under the impression that, like the abbreviation of words, it is vulgar. In a few high-class ladies' schools its use is sternly repressed, and there are many fluent and habitual writers who never employ this sign. This in itself supplies a useful clue to characterisation. Others, again, only employ it in such combinations as "& Co.," "&c.," though this latter abbreviation is, as often as not, written "etc." by many persons.

The dash (—) occurs very largely in many writings, and particularly in those of ladies, who regard it as a universal punctuation mark, and employ it indiscriminately as comma and full stop. Many persons of both sexes invariably make a dash below the address on an envelope, using it as a kind of final flourish. A close examination of the samples provided in such a writing will reveal many valuable idiosyncrasies. It may be a bold, firm horizontal line, a curve with a tick at either end, or both; a wavy line or even an upward or downward line. Note, also, the ragged edge, as it affords an important clue to the style of holding the pen. The dash is so essentially an unpremeditated and mechanically-formed hand-gesture that it often betrays more of the character of the writer than any other letter. Cases have been known in which the writer of an anonymous letter has successfully

concealed all his characteristics, but in putting the final stroke in the form of a dash he has so far forgotten himself as to produce, quite unconsciously, what was probably one of his most pronounced hand-gestures, thus providing a clue which led to ultimate conviction.

Punctuation is rarely a marked feature of English handwriting. It is said that many of our leading literary men practically leave this important phase of their work to the printer's proof-reader. An examination of a hundred private letters by different hands will show a marvellous scarcity of punctuation marks, and few correspondents use or appear to know the use of any stop other than the comma and full point, the dash being made to do service for all else. The mark of interrogation is fairly often used, and its formation gives scope and material for careful examination. The examples offer suggestions of the form and direction eccentricity sometimes takes.

The colon and semicolon are very little used by average writers, and when they are, it is generally inaccurately, but nearly always under the same circumstances, which should be carefully noted. The quotation marks (" ") are still more rarely employed, and it will be found on examination that most people form them wrongly. The accurate style is this, " ", but as often as not the initial quotation has the dot at the top instead of the bottom.

Another almost universal omission is that of the full point after initials to a name, after "Esq.," and in the initials of postal districts, as E.C., W.C. The addressing of an envelope affords interesting and valuable material for clues, for it will generally be found that a writer who uses punctuation marks at all will do so with automatic regularity under the same circumstances.

The shape and general formation of stops and marks must be carefully examined and classified, for they belong to the significant unpremeditated class of hand-gestures, and are, therefore, valuable as clues to peculiarities.

The "Esq." that generally follows a man's name on a letter addressed to him partakes much of the character of a symbol like the "?" or "!", and, being automatic through usage, is therefore valuable. Most writers use a uniform style

in shaping it, and the three letters that go to make up the abbreviation are fortunately of a kind that lend themselves to characterisation.

Notice, also, the position of the possessive sign in such words as "men's," "writer's." If accurately placed, the writer may be presumed to understand punctuation, and will give evidence of it in a long writing.

CHAPTER IX.

PAPER AND WATERMARKS.

THE brownish tint of old age which paper needs to help out a fraud is obtained in various ways—sometimes by steeping in a weak solution of coffee, but in other cases by holding it before a bright hot fire. This latter device is, fortunately, not easy of accomplishment, considerable care, judgment and even luck being needed to ensure a satisfactory result. In our own case we have failed persistently in the attempt, the paper becoming tinted so unequally as to excite remark at first sight.

All the old pattern of letter paper was almost uniform in size—post quarto, and the watermark is invariably very distinct, explainable by the fact that the art of close weaving the wire mould was not then brought to its present state of perfection.

The watermarks are very fairly imitated by means of a pointed stick dipped in a solution of spermaceti and linseed oil melted in water and stirred till cold; or, equal quantities of turpentine and Canada balsam shaken together. The same result may be obtained by the use of megilp, a mixture employed by artists.

The detection of this watermark fraud is simple and infallible. If the suspected document be moistened with lukewarm water the spurious watermark disappears immediately, but if genuine, it becomes plainer.

The worn and dingy appearance inseparable from age in a letter is accentuated by rubbing it lightly with a dirty duster. The effect is usually obvious under a strong glass, the passage of the dirty cloth revealing itself in minute parallel lines.

Very little care is needed to distinguish between paper that has been taken from books and the genuine letter paper of the period. To begin with, such letters are always on single sheets. In genuine cases, the sheet is as often as not a folio of four pages. In the majority of cases the bogus sheet is of no recognised size. If taken from a book larger than post quarto, it has had to be cut to conceal the tear. This operation has made an irregular sized sheet—too small for post quarto, too large for the next size. In the genuine writing paper, all four edges are usually rough like those of a bank note. If the sheet has been abstracted from a book, one edge must have been cut or trimmed.

Again, such paper is of unequal thickness, the writing paper of the period being much smoother and finer than the printing paper, while in parts it is almost certain the ink has run, as it does on a coarse, absorbent paper. This is a sure sign that the paper is printing and not writing.

Further, such paper is certain to show signs of wear at the bottom edges where they have been handled and exposed, while that part of the page which has been closest to the inside edge of the cover is generally cleaner, and shows less sign of wear. In many cases the impression of the book binding is plainly visible.

A careful examination and comparison of a few sheets of genuine letter paper of the seventeenth and eighteenth centuries with the blank leaves found in printed books will reveal differences so marked that mistake is scarcely possible afterwards.

It often occurs that grease marks interrupt the forger. Knowing that he cannot write over them, and that they are hardly likely to have existed on the paper when it was new, and when the letter was supposed to be written, he avoids them. The result becomes apparent in unequal spacing of words and even letters.

On one occasion a really excellent forgery, which had successfully withstood all the tests we had applied, had its real character revealed by a curious oversight on the part of the forger.

It was an early seventeenth century document, and our attention was arrested by a peculiar uniform smudgy

appearance, such as results from blotting with a hard, unabsorbent, much-worn sheet of blotting paper. At the period of the presumed date of this document blotting paper was unknown, writings being dried by means of a specially prepared fine powder called pounce, sand, or a powder containing fine crystals of metal intended to give an ornamental gloss to the ink. Close examination under the microscope revealed the truth. There were no signs of pounce or any other drying powder, the crystals of which are usually plain to the unassisted eye, but there were distinct signs of the fibre of the blotting paper left in the ink.

Another forgery we discovered through the presence in the centre of the sheet of paper of a very faint square outline which enclosed a slight discolouration. The sheet had, as usual, been removed from a book, and the square outline was a faint impression of a book-plate which had been affixed to the opposite page. The discolouration was caused by the ink on the book-plate.

It should be superfluous to have to remind intelligent and educated persons that it is necessary for a collector of old documents to make himself familiar with the peculiarities, habits and customs of the period in whose literary curiosities he is dealing. Yet fact compels the admission that extraordinary laxity and even ignorance exist on these points. We are acquainted with a collector, by no means uneducated, who gave a good price for a letter purporting to be by Sir Humphrey Davy, the inventor of the miners' safety lamp, enclosed in an envelope. He was ignorant of the fact that envelopes were unknown until 1840, thirty years later than the date of this particular letter. Envelopes supposed to have been addressed by Dickens have been offered for sale and purchased, bearing postage stamps not in circulation at the period.

One would imagine that a forger would pay sufficient attention to his materials to be on his guard against the blunder which earned the perpetrator of the Whalley Will Forgery penal servitude. He put forward a will dated 1862, written on paper bearing in a plain watermark the date 1870! Another indiscreet person asked the Court to accept

a will written and signed with an aniline copying pencil, but dated years before that instrument had been invented.

Both the works by Dr. Scott and Mr. Davies, given in the list, show samples of watermarks of the various periods affected by forgers of literary documents.

CHAPTER X.

INKS.

EXAMINATION for determining whether a writing has been done at one time, or added to later, necessitates some acquaintance with the nature and qualities of ink. In the ordinary case the assistance of a chemist is necessary, but an enlarged photograph shows up minute differences with amazing accuracy.

In the majority of instances alterations are made some time after the original has been written, in which case a difference in the shade of the ink will be perceptible, even to the unassisted eye. This is particularly true when the now almost universal blue-black ink is used.

The period required for an addition to become as black as the older writing depends very much upon the character of the paper. If this be smooth and hard, and the writing has not been dried with blotting paper, but allowed to dry naturally and slowly, it will become black much quicker than if the paper be rough and of an absorbent nature.

A fairly reliable test is to touch a thick stroke of the suspected addition with a drop of diluted muriatic acid—as much as will cling to the point of a pin. Apply the drop to the suspected addition and to the older writing at the same moment, and carefully watch the result. The newer writing will become faint and watery, with a bluish tinge almost instantly, but the change will be slower in the case of the older writing, taking ten or even twenty seconds. The longer the period required for the change, the older the writing.

This same acid test is applied to prove whether a writing is in ordinary ink, or has been lithographed or photographed. If the two latter, the acid will have no effect.

On more than one occasion collectors have purchased as original autographs of celebrities which proved to have been lithographed or photographed, but the persons so deceived have generally been inexperienced amateurs.

When the difference between a written and printed signature has been once noticed it is hardly likely that an observant person will be deceived. It is, however, as well to be carefully on guard against this contingency, for modern photography and process printing have been brought to such a degree of imitative perfection that it is easy for a not too keen-eyed person to experience great difficulty in forming an opinion in the absence of the acid test. Fortunately that is infallible.

It must, however, be admitted that up to the present no great success has attended efforts to determine how long an interval has passed between the writing of the original and the suspected addition. Broadly speaking, the most that the expert can hope to gain from an examination of ink under these circumstances are hints, clues and suggestions rather than definite, reliable facts. Fortunately it often occurs that a suggestion so obtained proves of immense value to the trained or careful observer, though it might convey no conviction to others.

As in the case of nearly all deductive reasoning the handwriting expert becomes sensitive to slight suggestions. If called upon, as he sometimes is, to explain to others how and why one of these slight and almost imperceptible signs fit in with his theory, he fails. Therefore the cautious expert, like a good judge, is careful in giving reasons for his judgment only to cite those which are self-evident.

Many an expert has made a poor exhibition in the witness-box by failing to convey to a jury the impression produced on his own mind by a slight piece of evidence, the proper understanding and interpretation of which can only be grasped by those who have learned how to recognize faint signs.

The process of chemically testing inks for the purpose of ascertaining the points mentioned is quite simple, and is distinctly interesting. In a very important case the services of a qualified chemist will probably be requisitioned, but the

cost of the necessary material and the time required to make oneself proficient as a capable tester are so slight that even the small fee that would be charged by a chemist is scarcely worth paying.

The materials necessary are a few test tubes, some bottles of lime water, diluted muriatic acid, a solution of nitrate of silver in distilled water, in the proportion of ten grains to the ounce, some camel hair pencils, and clean white blotting and litmus paper. The whole need not cost more than half-a-crown.

The method of using these materials is best illustrated by describing a test often needed by autograph collectors.

A very common method employed by forgers to give an appearance of age to the ink used in spurious old documents is to mix with ordinary ink, muriatic acid, oxalic acid, or binoxalate of potash. The presence of these colouring agents can be detected in the following manner.

In the first place, washing the letter with cold water will make the ink become darker if acid has been used to brown the ink, but the following test will settle the point beyond dispute :

With a camel's-hair brush wash the letter over with warm water. If, as sometimes happens, a sort of paint or coloured indian ink has been used, this will be immediately washed away and disappear, leaving a rusty smudge. If not, apply the litmus paper to the wetted ink, and the presence of acid will be shown in the usual way by the litmus paper changing colour. If genuine, wetting makes no difference.

Next, pour a drop or two of the water from the writing into a test tube from off the letter, add a little distilled water and one or two drops of the nitrate of silver solution.

If muriatic acid has been used to colour the ink, a thick white precipitate will be seen in the tube immediately.

If not, pour a few more drops of the water which has been washed over the writing into a second test tube, add a little distilled water and a few drops of lime water. A white precipitate will be seen in the tube if either oxalic acid or binoxalate of potash has been employed.

In many cases it will be sufficient to place the tip of the tongue to a thick stroke. An unmistakable acid taste will be noticed.

Further and fuller particulars of the methods resorted to by forgers to simulate ancient documents will be given in the chapter on Autographs.

It is sometimes important to know whether a stroke has been made over another, as in the famous case in which the real issue turned on the question whether an apparent alteration in a signature was really a pen-mark made to indicate where the signatory should sign. It was obvious that if the mark was made first the signature would be over it; if, as was suggested, the mark was added in an attempt to alter or touch up the signature, it must have been written over the signature.

In cases of this kind an enlarged photograph leaves no room for doubt. The ink is seen lying over the lower stroke as plainly as a layer of paint in a picture can be seen overlying the stroke beneath.

This is one of those apparently difficult points which become marvellously simple when dealt with in a practical manner.

Pages might be needed to explain what a very simple experiment will reveal at a glance.

Take a word which has been written long enough for the ink to have become dry, and make a stroke across it. For example, make a letter t without the bar, then, after a lapse of an hour or two, add the cross bar. When this is quite dry and has become as dark as the first mark, examine it with a good glass. The ink of the added bar will be seen plainly overlaying the vertical stroke, but any doubt can be promptly removed by taking an enlarged photograph.

Even when the second stroke is added while the ink on the first is still wet the upper stroke can be distinguished, though not so clearly as if the first stroke had been allowed to dry first.

By practising and examining such strokes, the student will soon learn to distinguish important signs which leave no doubt as to which stroke was first made.

CHAPTER XI.

ERASURES.

THE alteration of the figures and amount written on a cheque is generally effected by erasure. At one time chemicals were used for this purpose, but fortunately the modern cheque is forgery-proof in this respect. No means are known to chemists by which ordinary writing can be removed from a cheque without leaving a sign too pronounced to escape detection.

But even erasure on a cheque is extremely difficult, and the experienced eye of the average bank teller can detect it in the vast majority of cases. Frauds perpetrated by this means are very rare, and are usually the result of gross carelessness on the part of the person accepting the document so altered.

The more frequent form of cheque fraud is effected by adding to such words as six, seven, eight and nine. The addition of *ty* and *y* is all that is necessary. But the ordinarily careful business man never leaves sufficient blank space between his words to admit of this addition, while there are few bank tellers who do not carefully scrutinise a cheque made out for these larger amounts.

It may be accepted as a satisfactory fact that cheque forgery is not only extremely difficult, but rarely successful. Great frauds are usually perpetrated by means of other instruments, such as bills of exchange, credit notes, &c.

An erasure is the easiest thing to detect if looked for. To begin with it is only necessary to hold a scratched document to the light to have the alteration revealed.

Erasing must of necessity remove part of the surface of the paper which is made noticeably thinner at the spot erased.

In nearly every case the writing that has been added to the erasure is blurred, owing to the rough and absorbent character of the paper. Expert forgers have devised means of counteracting this by rubbing in some substance which partially restores the original smoothness and mitigates the blurred appearance. But such devices ought not to be successful for they are so easily detected.

As a matter of fact the only chance the forger of an erased cheque has lies in the carelessness of the teller. Any crowding of words and unequal spacing in the filling up of a cheque ought to excite suspicion and provoke careful and closer scrutiny, and, it may be added, it generally does.

The addition of letters intended to increase the value of a number, such as the adding of *ty* to six or seven, is easy of detection if properly looked for.

It is safe to assume that the addition has been made long after the original word was written, and the point of junction can be detected by the aid of a good glass.

Had the word been originally written sixty, the chances are that there would be no perceptible break between the *x* and the *t*. Few persons write such short words in a disconnected manner. On placing the word under an ordinary glass the point of junction will be plainly apparent, and a microscope, or an enlarged photograph, cannot fail to reveal the fraud. Of course these latter tests will not be possible under the ordinary circumstances attending the paying out of a cheque over the counter, but when once the peculiarities of such alterations have been studied, it is marvellous how quick the eye becomes in recognizing them at a glance.

Erasure in writings on stout thick paper is not quite so readily noticed as those on thin paper such as cheques; but the same methods of examination will apply—holding the document to the light, or level with and horizontal to the eye. A very effective application of the latter test is to bend or curve the paper, making an arch. The bending has a tendency to stretch and widen the erased part, and if any smoothing substance such as starch or wax has been added

to restore the gloss of the scraped portion, it will usually reveal itself by separating and coming away in dust or tiny flakes. This process may be accentuated by drawing the suspected document over a ruler, or, better still, a pencil, repeating the motion several times.

CHAPTER XII.

PENCILS AND STYLOGRAPHS.

IT is obvious that writing executed with a pencil or the now much-used stylograph will differ in many respects from that performed by an ordinary pen. It is not too much to say that their use will eliminate many features and introduce new ones. This change is mainly brought about by the different way in which a pencil or stylograph is held in comparison with a pen. There is a much greater sense of freedom. The pencil can be, and is, turned and twisted in the process of making a stroke as a pen cannot be, and the signs of this freedom become apparent in a more rounded stroke. Even a writer whose characters are acutely angular shows a tendency to a more graceful outline. As a matter of fact, it is comparatively rare to meet a pencilled writing that is pronouncedly angular.

The same remarks apply with only little modification to writing produced by the stylograph, and for the same reason—the ease and freedom with which the instrument is held.

There is no possibility of mistaking writing produced by a stylograph for that of an ordinary steel nib. The strokes are absolutely uniform in thickness. No nib-formed writing can be so, for it is impossible for a writer, however careful, to avoid putting pressure on his pen at some point; and the opening of the nib, however slight, must produce an apparent thickening.

Therefore, recognising these facts, the expert is always extremely careful in giving an opinion upon a writing produced by pencil or stylo unless he have ample specimens of the writer's productions done with these instruments.

At the same time, although an absence of characteristics present in pen writing would be noticeable, the main features would exist: for example, the space between words and

letters would be the same ; the dot over the *i* would be in its customary position ; the bar of the *t* would be of the same type as heretofore. The principal changes would be in the direction of a more uniform stroke with a tendency to greater rotundity.

Persons who habitually employ the stylo very frequently develop an unconscious habit of twisting the pen at certain points so as to form a deep, rounded dot. This occurs principally at the ends of words and strokes. A magnifying-glass reveals this peculiarity at once, and, when discovered, notice should be taken of the circumstances under which this twisting is usually done. It will be found, most probably, that the trick is uniform ; that is, certain letters or strokes are mostly finished with the dot.

There is a well-known public character who for years has employed no other writing instrument but the stylo. His writing possesses one peculiarity which is so habitual that in four hundred examples examined it was absent in only five. He forms this twist dot at the end of the last letter at the end of every line. The inference and explanation is that, in raising the pen to travel back to the next line, he twists it with a backward motion in harmony with the back movement. Another trick is to make the same dot in words on which he appears to have halted or hesitated before writing the next. In every such case there is an extra wide space between the word ended by a dot and that which follows. It would appear as if the writer mechanically made the dot while pausing to choose the next word. This is a striking example of the unconscious hand-gesture.

Something akin to it occurs in the handwriting of a famous lawyer. Here and there in his letters will be noticed a faint, sloping, vertical stroke, like a figure 1. Those who have seen him write explain it thus. While hesitating in the choice of a word he moves his pen up and down over the paper, and unintentionally touches it. It is such slips as these which often supply the expert with valuable clues to identity. When they occur they should be carefully examined, for in the majority of cases a reason will be found for their presence.

CHAPTER XIII.

ANONYMOUS LETTERS AND DISGUISED HANDS.

THAT mischievous and cowardly form of secret attack, the anonymous letter, demands, unfortunately, a large amount of attention from the handwriting expert. One of the most pleasant rewards that can attend the conscientious and painstaking student of handwriting lies in the knowledge that his art may sometimes enable him to bring to deserved punishment the assassin of reputation and domestic happiness.

It is a moot point, which has been discussed by legal authorities, as to whether the handwriting expert is justified in tendering evidence and opinions of a kind that may be said to belong by right to the criminal investigator. By this is meant that the expert should not be allowed to point out to a jury such pieces of circumstantial evidence as the similarity of the paper used by the suspected person with other found in his possession; that he ought not to direct attention to postmarks, coincidence of dates, similarity of ink used, the employment of certain words and phrases, and other external and indirect clues that point to the authorship. It is urged that the whole duty of the expert is to say whether in his opinion two or more writings are by the same hand or not, and any expression of opinion outside this question is *ultra vires*.

The obvious answer to this objection is that it is impossible to limit the expert in the selection of those points which appeal to and assist him in forming an opinion. It is impossible to say what may or may not suggest a valuable clue to a keen observer; and as the expert is often called upon to give reasons for his opinion he is quite justified in indicating the steps by which he arrived at it.

These circumstances arise more often in connection with anonymous letters than with ordinary signature forgeries,

for the field of exploration and the material examined are so much larger. Details become invaluable. The quality and make of the paper used, or a peculiar method of folding and placing it in the envelope may afford a clue that will put the expert on the high road to an important discovery. It is impossible to say how or where a clue may lurk. The torn edge of a postage stamp once supplied a hint that was followed up successfully. A smudge on the envelope, that matched a similar one on a packet of envelopes in the writing case of a person quite unsuspected, led to conviction, as did a number of an address that was crossed out and rewritten, the anonymous writer having, by force of habit, begun with the number he was in the habit of writing—his own.

In short, the expert has, *nolens volens*, to assume many of the functions of the crime investigator in dealing with apparent trifles, and even if they do not always help him in reaching his goal, they provide material for exercising the useful art of observation. Strictly speaking the expert should, perhaps, ignore all outside suggestions as to the authorship, and confine himself to saying whether or not the specimens submitted are in the same handwriting; but in practice this will be found extremely difficult, if not impossible, for the student cannot shut his eyes to the accidental clues that invariably arise in the examination of the evidence, and almost before he realizes it, the most cautious expert finds himself trespassing upon ground that by right should be the preserve of the detective.

The points raised here may, however, be safely left to be dealt with by the judgment of the student as they arise. In the early stages of study they will probably not present themselves with the same force and frequency as later on, when they will be appreciated as providing useful private pointers for guidance; and though at times they may put the inexperienced student upon a false scent, he will have no difficulty in detecting his error if, when in doubt, he follows the principles laid down for the comparison of handwriting.

The first step to the examination of the anonymous letter consists in procuring as many suspects as possible, which, as before advised, should be lettered or numbered and put aside, until the original, which in this case is the

anonymous letter, has been studied and mastered. The external evidence of which so much has already been said may or may not be looked for.

Next proceed with the examination and comparison of the writings. It is presumed that the student has prepared his notes of the peculiarities of the original; he has now to search for them in the suspects. Suppose he begins with the spurs and beards, having found them well marked in the original. He will take any one of the suspects and examine it for a repetition of the same signs. He may follow on with the rest of the suspects, taking advantage of his memory being fresh on this point, or he may prefer to exhaust one suspect of all its evidences before proceeding with another; but practice and experience will decide the best course in this matter, and influence the line of procedure.

Whatever method is pursued, all have the same object—the discovery of the peculiarities of the original in one or more of the suspects, and the student will be wise if he follow accurately the course laid down in the chapter on “How to Examine a Writing.”

It is generally safe to take it for granted that the writing in an anonymous letter is disguised. There are occasions when the author persuades another person to write for him, but only rarely; for the perpetrator of a contemptible act is not usually brazen and indiscreet enough to expose himself to others. The same reasons lend strength to the presumption that the writing will, so far as its general appearance goes, be as much the opposite of the author's usual style as his ingenuity can make it. The extreme back hand occurs very frequently. It seems to be the first impulse of the anonymous writer to avoid the right slope. Even when the normal hand is a vertical, with a tendency to back hand, the extreme left slope is often chosen. Fortunately, the assumed back hand is one of the most transparent of disguises. If the student has practised it, he will not need to be reminded how difficult it is for a writer to conceal his mannerisms. By altering the slope he has only stretched and lengthened his outlines, and the expert soon learns to recognise them in their new form.

Another common disguise is the illiterate hand. This is quite as easy of detection. It is no easier for the practised

and fluent writer to reproduce the shaky, irregular outlines of the illiterate, than it is for the speaker of pure and cultured English to imitate the coarse accent of the vulgar. However good the copy it always breaks down early, and the sudden and unconscious firm, clear and geometrically accurate stroke reveals the practised writer beneath the mask. Sometimes an accurately placed punctuation mark supplies the necessary clue, for when once the art of proper punctuation has been acquired it becomes almost automatic. Even experienced novelists are caught this way occasionally. They will introduce a letter, supposed to be the work of an illiterate character. The grammar and orthography suggest the idea, but the more difficult details of punctuation will be attended to, even to the apostrophe that marks the elided *g* in such words as "talkin'," "comin'," &c.

Very difficult and troublesome is the letter written throughout in imitation printed characters. The expert has to rely upon the curved lines, accidental punctuation marks and unpremeditated flourishes and hand-gestures; but, broadly speaking, such a letter is beyond the skill of the expert if unaided by accidental betrayal. If, as sometimes happens, the writer is ingenious enough to adopt an alphabet formed completely of straight lines and angles—an easy task—he may boast of having produced a detection-proof writing; that is, if characters formed with the aid of a rule can be called writing, for it defies detection, because there are none of the signs essential for comparison, and is less easy of identification than an incomplete skeleton. In the absence of external clues, an expert would refuse to do more than offer a very guarded opinion, and it would be wiser to decline to offer any comment whatever.

Another trick that has been resorted to by some persons is writing with the hand constricted by a tight-fitting glove. This produces a very effective disguise; but if the student will practise with the same impediment, he will discover many useful rules for guiding him on the road to penetrating this entanglement.

It should be remembered that the less control a writer has over his pen, the more likely is he unintentionally to revert to those forms to which he is habituated, for, left by

itself, the hand steers the more familiar course. Disguise, alteration and variation on customary forms are the result of premeditation. When the mind is occupied more with the subject than the formation of characters, the latter naturally assume that shape to which the force of custom has bent them.

CHAPTER XIV.

FORGED LITERARY AUTOGRAPHS.

THE collection of autographs, letters, and documents of literary and historical interest has for many years been a prominent feature in the collecting world, but at no time was the quest more keen or conducted on more systematic lines than to-day. The records of the leading sale rooms often supply matter for surprise, the prices asked and obtained for rare and choice specimens being such as to excite both wonder and amazement, sometimes tempered with scepticism.

It is, therefore, not surprising that this profitable and growing market should have attracted the fraudulent, for the prizes when won are generally of a substantial character, and amply repay the misapplied effort and ingenuity demanded.

The success which has attended too many of these frauds may be largely accounted for by the fact that in many cases the enthusiasm of the collector has outrun his caution.

Many a man famous for his astuteness in the pursuit of his ordinary business has allowed himself to fall an easy victim to the forger, thus exemplifying the familiar adage that we are easily persuaded to believe what we want to believe.

The recorded stories of some of the frauds perpetrated upon ardent and presumably judicious collectors read like the tales told so often of the triumph of the confidence trickster, and one marvels how a person of ordinary power of observation, to say nothing of experience, could fall a victim to a fraud requiring little perception to detect. The explanation doubtless lies in the direction indicated—the ardour of the pursuit, the pride and joy of possessing something that is absolutely unique.

The leading case—to use an expressive legal term—is that known as the Vrain-Lucas fraud, the principal victim of which was Mons. Chasles, probably the greatest of modern French geometricians, and one of the few foreign savants entitled to append the distinguishing mark of a F.R.S. of England.

Lucas was a half-educated frequenter, and nominal reading student of the great Parisian library, and for some years had dealt in autographs in a small way, the specimens he offered being undoubtedly genuine. Inspired by the collecting ardour and the apparent blind faith placed in him by M. Chasles, Lucas embarked upon a series of deceptions so impudent, that it is easy to sympathise with the defence put forward by his advocate at the trial, namely, that the fraud was so transparent that it could only be regarded as a freak.

In the period between the years 1861 and 1869, Lucas sold to his dupe the enormous number of 27,000 documents, every one a glaring fraud. They comprised letters purporting to have been written by such improbable authors as Abelard, Alcebiades, Alexander the Great to Aristotle, Cicero, Cleopatra, Joan of Arc, Sappho, Anacreon, Pliny, Plutarch, St. Jerome, Diocletian, Juvenal, Socrates, Pompey, and—most stupendous joke of all—Lazarus after his resurrection.

It is hard to believe, and but for the irrefutable records of the Court, few would credit the fact that every one of these letters was in the French language! And the dupe a highly educated mathematician of European repute.

In the face of such incredible gullibility one is disposed to regard the sentence of two years' imprisonment and a fine of 500 francs as extravagantly severe, even despite the fact that Lucas received in all over 140,000 francs from M. Chasles.

The Chatterton and Ireland forgeries are familiar to all educated persons. These, however, hardly come under the head of the class of fraud with which the ordinary forger is associated. In each of these cases the motive of the deception was not so much to make money as a literary reputation. In both cases presumably competent judges were deceived. But the standard by which they gauged the genuineness of the productions was not caligraphic, but

literary. In neither instance was there occasion or opportunity for the handwriting expert to exercise his skill, for the sufficient reason that there existed no material with which the writings could be compared. What the literary expert had to do was to examine and compare the style of the compositions—a test in which the idiosyncrasies and predilections of the judge played a leading part.

Probably the greatest, and for a short time the most successful autograph fraud perpetrated in Great Britain was that known as the case of the Rillbank MSS., the detection and exposure of which were mainly attributable to one of the authors of this work (Capt. W. W. Caddell).

Just before, and up till 1891, there was in Edinburgh a young man named Alexander Howland Smith, who claimed to be the son of a reputable Scottish law official, and a descendant of Sir Walter Scott.

On the strength of his presumed connection with the great novelist, he had no difficulty in disposing of, to an Edinburgh bookseller, for prices whose smallness alone should have excited suspicion, letters purporting to be in the handwriting of Sir Walter Scott. Emboldened by success, he embarked upon a wholesale manufacture of spurious letters bearing the signatures of Burns, Edmund Burke, Sir Walter Scott, Grattan and Thackeray. His principal victim was an Edinburgh chemist, Mr. James Mackenzie, who, when the fraud was not only suspected, but proved, distinguished himself by a stubborn and courageous defence of the genuineness of the documents.

Smith's *modus operandi* consisted in purchasing large sized volumes of the period of the subjects of his forgeries, and using the blank leaves for the purpose of fabricating the letters. In May, 1891, a number of alleged Burns' letters were put up for sale by public auction at Edinburgh, fetching the surprising paltry price of from twenty to thirty shillings apiece.

It was a feature of all Smith's productions that the letters were extremely brief—a feature common to literary forgeries. The circumstance which first gave rise to suspicion was that the letters attributed to Scott, Burke, Burns, General Abercrombie, Grattan and Thackeray all began and ended

with the same words. Those signed by Sir Walter Scott all began "I have your letter," and ended "I remain," a form of phraseology the reputed writer never used, but which, according to Smith, was common to all the distinguished men whose handwriting he had counterfeited with considerable success.

On the strength of the partial guarantee provided by the sale of some of these documents at a reputable auction room, Captain Caddell purchased a parcel of alleged Scott letters without prior inspection. A brief examination disclosed their fraudulent nature, and Smith was arrested. The Edinburgh police took the matter up, and the impostor was convicted in June, 1893, and sentenced to eighteen months' imprisonment.

Thackeray and Dickens are favourite subjects with most literary forgers, Washington and Benjamin Franklin running them very close for favouriteship. American collectors are particularly keen on procuring specimens of the last two-named, and there is grave reason to believe that many fall easy victims.

Fortunately the facilities for comparing and testing the genuineness of the autographs of every distinguished person whose holographs are most in favour with the forger, are numerous. In addition to the splendid collection of specimens extant at the British Museum Library, there are many facsimiles available.

The excellent work on Autograph Collecting by Dr. Henry T. Scott (Upcott Gill, London) is indispensable to the collector. It contains some hundreds of specimens, specially selected for the purposes of comparison, and gives besides many very valuable rules and hints for detecting the real from the sham.

Dr. Scott, writing of the autographic letters of his distinguished namesake, says:

"Of Sir Walter Scott's autographs it may be observed (1) 'the paper is generally letter size, gilt edged, with a soft, firm feeling to the touch, and an unglazed surface. (2) The date and residence are placed on the top and right hand, with a good space before the 'My Dear Sir,' uniform margins on the left side of the paper of a quarter of an inch, but on the right side no margin at all, the writing being carried close to the edge. The folding is done with the

“ precision of a man of business, forming the space for the
 “ address into a nice oblong almost in the centre of the sheet,
 “ and the first line of the address is written nearly in the
 “ centre of the space with the remainder below.

“ The watermarks found on the paper are one of the
 “ following: Valleyfield, 1809; C. Wilmott, 1815; J. Dickinson
 “ and Co., 1813; J. Dickinson, 1816; J. Dickinson (without
 “ date); J. Whatman, 1814; J. Whatman (without date);
 “ Turkey Mill, 1819; Turkey Mill (without date);
 “ G. C. & Co., 1828.”

The paper used by Burns for his correspondence was always large in size, rough in surface, never glossy, and all four edges had the rough edge that is the peculiarity of a Bank of England note.

It is worthy of remark that in the case of the A. H. Smith Burns forgeries, suspicion was first excited by a simple but significant matter. The paper contained several worm holes. These had been carefully avoided by the writer, he knowing that if his pen touched them the result would be a spluttering and spreading of the ink.

Now it is safe to assume that these worm holes, being the effect of age, did not exist at the time the letter—if genuine—was written; as the worm did its work long afterwards, it must be regarded as a fortunate circumstance that in perforating the paper it refrained from destroying the writing, carefully selecting the wider spaces that the poet had, with commendable foresight, left for the insect's depredations.

The letters of Thackeray are in two styles of handwriting, the earlier sloping slightly, the latter vertical, round, neat and print-like, the capital *I* being invariably a simple vertical stroke. His is the most neat and uniformly readable hand of all the great literary characters. It is somewhat unfortunate that he was not anything like so uniform in his choice of paper. Letters are in existence on an extraordinary variety of material, from a quarto sheet to a scrap torn from half a sheet of note paper. On many of these letters is neither address nor date, but when once the characteristics of the charming manuscript have been mastered, they are never forgotten, and are recognisable amid the closest imitations.

There are extant a number of forged Thackeray's. Their distinguishing features are that they are invariably very short, as if the forger feared to provide sufficient matter to supply material for comparison; most are on single half sheets of note paper, many on quarto sheets of varying texture and quality, and the characteristic vertical *I*, Thackeray's trade mark, always occurs. It is shaky and often out of the perpendicular, as the genuine rarely is. In the forgeries we have seen and suspect to be the work of A. H. Smith, a very significant sign is a sudden thickening of the downstrokes of tailed letters like *y*, *f*, *g*, producing a tiny diamond-shaped excrescence in the middle of the letter. The glass reveals that ragged-edged stroke which is inseparable from the writing of the nervous copyist.

It is generally safe to be cautious about very short letters. The forger well knows how difficult is the task of maintaining an assumed character. Just as the mimic may succeed in reproducing the tone and manner of a person with sufficient closeness to deceive even the most intimate acquaintances of the subject, yet fail to carry the deception beyond a few words or phrases, so the literary forger invariably breaks down when he attempts to simulate handwriting over many sentences. So conscious is he of this great difficulty that he often avoids it by boldly copying some genuine letter. We have had offered to us "guaranteed" Thackeray letters which we immediately recognised as such. In one particularly glaring case the forger had copied the original letter very fairly so far as the penmanship was concerned, but while the original was written on a half sheet of note paper, the forgery was on a different size paper, and the writing across the length of the paper instead of the breadth. This naturally disarranged the spacing between the words, which in all Thackeray's writings is a pronouncedly regular feature, and this variation was in itself sufficient to excite suspicion.

The popularity of Dickens among collectors grows steadily. Despite the fact that he was an industrious correspondent, and that a very large number of his letters appear from time to time in the market, the demand is ever in excess of the supply. As a consequence he has suffered

perhaps more than any of the literary immortals at the hands of the forger. Yet it is safe to say that there should be no writer so safe from fraudulent imitation, for there is a peculiar distinctiveness about his caligraphic productions that once seen and noted should never be forgotten. Specimens are easily available. The catalogues of dealers are constantly presenting them, and most public libraries possess examples, either in the original holograph or in some form of reproduction.

Probably no writer preserved his style with such little change as Dickens. His signature in later years varied somewhat from that of his literary youth, but the body of his manuscript retained throughout the same characteristics. It was always a free, fluent, graceful hand, legible as that of Thackeray when its leading peculiarities have been mastered, but less formal and studied than his. It was always remarkably free from corrections or interlineations. He wrote with the easy freedom of the stenographer; indeed it is easy to recognise in the delicate gracefully formed letters the effect of years of training in the most difficult and exacting form of manuscript.

Perhaps the leading peculiarities in the Dickens holograph are these:—

The date of the month is never expressed in figures, but always written in full; in fact, abbreviation in any form he never countenanced.

The letter *y*, both as a capital and a small letter is a figure 7 except in the affix “ly,” when the two letters become an *f* or long stroke *s*.

The letter *t* is crossed by the firm downward bar, which the character readers claim as a sign of great resolution.

Letter *g* is invariable in form.

Capital *E* consists of a downstroke with a bar in the centre.

The hook of many final letters has a tendency to turn backwards.

New paragraphs are marked by beginning the line about an inch from the left hand margin.

A very marked peculiarity noticeable in many letters is that the left-hand margin gradually grows wider as the lines approach the bottom of the page. The narrowing is

wondrously regular, a line drawn from the first letter on the first line to the corresponding position on the last will touch nearly 'every other line. This peculiarity appears to have escaped every forger whose work we have examined.

If the signs relied upon by the readers of character in handwriting are to be accepted, self-esteem was a pronounced characteristic of the great novelist. His writing abounds with those subtle symptoms of the prevalence of that weakness.

His signature is perhaps the best known of any with which the British public are familiar. It is remarkably uniform, and remained precisely the same from the time he adopted it after the *Pickwick* period until his death. That which he used in youth was less striking, but none the less self-conscious.

After the *Pickwick* period Dickens adopted the use of blue paper and blue ink. Letters in black ink, if undated, may safely be attributed to the earlier period.

His note paper was in later years of the regulation note size. The address, Gads' Hill Place, Higham by Rochester, Kent, was in embossed black old English letter. His paper was hand-made, and of good quality. The envelopes were blue, of the same quality paper, but without crest, monogram or distinctive mark. Dickens' vanity expressed itself in the habit of franking envelopes, *i.e.*, by writing his name in the left-hand bottom corner, after the fashion in vogue when Peers and M.P.'s enjoyed the privilege of free postage.

His letters of the pre-envelope period—before 1842—were on quarto sheets. These are exceedingly rare.

There is one feature about autographic forgery which may always be relied upon to assist greatly in the work of detection. As a general rule there is sufficient matter in a literary forgery to supply the necessary material for comparison. It must of necessity be a copy, if not of an existing original, at least of the general style. The process of imitation must be slow and cautious, and the signs remain in shaky, broken lines, and a ruggedness entirely absent from the writing of the real author, which is fluent and free. Even the shakiness of age noticeable in a few distinguished handwritings is different to the shakiness of the forger's uncertainty.

CHAPTER XV.

FORGED SIGNATURES.

THE most difficult phase of the art of the handwriting expert consists in the detection of forgery in signatures. It will be obvious to the student who has followed the instructions and illustrations already given that this difficulty is brought about by two principal causes: first, by the paucity of material for comparison; secondly, because of the very important fact that a forgery must, by its nature, be a good and close copy of an original. This means that the unconscious tricks and irregularities that often abound in a long letter, written in a more or less disguised hand, are almost entirely absent from a forged signature. It follows, therefore, that the student must have some other clues and rules to guide him, for he cannot rely upon the chance of a slip or accidental trick occurring in a signature that contains at most perhaps a dozen letters.

The first step in the examination of a suspected signature is to master thoroughly the various characteristics of the genuine signature. These must be studied in every possible relation, and from as many specimens as can be obtained. The magnifying glass must be in constant use and the eye alert to detect the angle at which the pen is habitually held, the class of pen used, and the degree of pressure and speed employed. These last-named points can only be discovered as the result of practice and observation, and though at first sight it may appear impossible to form a correct estimate of the pace at which a pen has travelled, the student will, if observant, soon learn to detect the difference between a swiftly formed stroke and one written with slowness and deliberation. By making a number of each kind of stroke and carefully examining them through a glass, the student will learn in an hour more than can be taught by means of

verbal description. The study of the genuine signatures must be continued until every stroke and its peculiarities are as familiar as the features of a well-known face, for until one is thoroughly impregnated with the original it will be useless to proceed with the examination of the suspects.

At first sight the student will probably perceive very little, if any, difference between the original and the suspect. It would be a very clumsy forgery if he could. Gradually the points of dissimilarity will become clear to him, and with each fresh examination they grow plainer, until he is surprised that they did not sooner strike him; they are so obvious that the eye cannot avoid them; they stand out as plainly as the hidden figure, after it has been detected, in the well-known picture puzzles. There are few faculties capable of such rapid and accurate development as that of observation. Thousands of persons go through life unconscious of the existence of certain common things until the occasion arises for noticing them, or accident forces them upon the attention; then they marvel that the thing should have escaped observation. This is a truism, no doubt, but the force of every platitude does not always present itself to every one. The comparison of handwritings is so essentially a matter of cultivating the powers of observation, that even if turned to no more practical account than that of a hobby its value as a mental exercise is great.

There are two principal methods by which a signature may be forged: first, by carefully copying the original as one would copy a drawing; secondly, by tracing it.

The first process is referred to as copied. The forger will, most probably, have practised the signature before affixing it to the cheque or other document, thereby attaining a certain degree of fluency. But however well executed, close examination with the aid of the magnifying glass will reveal those signs of hesitancy and irregularity that one may reasonably expect to find in a copy.

There is no part of a person's handwriting so fluent and free as his signature. Even the most illiterate persons show more freedom and continuity of outline in their signature than in the body of their writing. This is explicable on the ground of usage. A writer may feel a degree of momentary

uncertainty in forming a word that he does not write frequently, but his signature he is more sure about. He strikes it off without hesitancy, and in the majority of cases appends some meaningless flourish, which may be described as a superfluous stroke or strokes added for the purpose of ornamentation, for adding distinctiveness, or, in some cases, and particularly with business men, with the idea that the flourishes help to secure the signature from forgery. Such writers will probably be surprised to learn that there is no form of signature so easy to forge as that involved and complicated by a maze of superfluous lines and meaningless flourishes. The most difficult signature for the forger is the clear, plain, copy-book-modelled autograph. A little thought and examination will make the reason for this clear.

Let a signature be enveloped in a web of curves and flourishes, making it look like a complicated script monogram. The lines are so numerous that the eye cannot take them all in at a glance, and, if copied, any slight irregularity or departure from the original is more likely to pass undetected amid the confusing network of interlaced lines. If, on the other hand, the signature be simple and free from the bewildering effects of flourishes, the entire autograph lies revealed, a clear and regular outline, and the slightest variation from the accustomed figure stands out naked and plain. Most of the successful forgeries will be found to be on signatures of the complicated order. Their apparent impregnability has tempted the facile penman to essay the task of harmless imitation; his success has surprised and flattered him, and the easy possibilities of forgery opened up. More than one forger has admitted that his initiatory lessons were prompted by an innocent challenge to imitate a particularly complicated "forgery-proof" signature.

It must be remembered that the eye of the casual observer takes in a word as a whole rather than in detail. This explains why an author can rarely be trusted to correct his own proofs. He knows what the word should be, and in reading his work in print he notices only the general expected effect of a word. It needs the trained eye of the proof-reader to detect the small *c* that has taken the place of the *e*, the battered *l* that is masquerading as an *i*. So long as the

general outline of the word is not distorted the wrong letters are often passed; and it is much the same with a signature with which one is fairly familiar. The trained examiner of handwriting, like the proof-reader, knows what to look for, and discovers irregularities that would escape the notice of the untrained eye.

The first part of a genuine signature that should be examined is the flourish, which includes all fancy strokes appended to it, and any superfluous addition to the body of the letters. A close scrutiny through the glass will show that the lines forming the tail-flourish are generally clear, firm and sharp in outline, being formed, not only without hesitation, but with a dash and decided sweep that are strongly at variance with the broken, saw-edged, unsteady line of the copy. It will also generally be found to follow an almost fixed rule in the matter of its proportionate conformation: that is, supposing the writer finishes up with a horizontal line under his signature, it will be seen, on averaging a dozen or so of them, that the distance of the line from the feet of the letters is proportionately uniform. If the line be begun with a spur or curved inward hook, that feature will be repeated. The end of the flourish or final stroke, at the point where the pen leaves the paper, should be very carefully examined. One writer finishes with an almost imperceptible dot, as if the pen had been stabbed into the paper; another finishes with a curve, either upward or downward; a third with a hook turned upward, either a curve or an angle; while a fourth continues the line till it becomes finer and sharper to vanishing point. Some writers are fond of concluding with a more or less bold and expansive underline running horizontally with the signature. A close examination will show a variation in the degrees of thickness of such a line, which should be carefully noted and looked for in other genuine signatures.

In this connection it will be found extremely useful and instructive to study strokes, either horizontal or vertical, with a view to discovering whether they were struck from right to left, top to bottom, or *vice versâ*. The glass will render it easy to detect beginning from end after a few failures, which, by the way, should not be allowed to discourage, for every

minute devoted to the study of handwriting is so much gain in experience, and represents so much more learned, which will never be forgotten.

The flourishes that occur on and about the signature proper must be treated as exaggerated loops, and their shoulders, arcs, hooks and toes carefully measured and noted. For this purpose an average genuine signature should be selected and gauged, which is done in this way: Place over it a sheet of transfer paper. With the scale-rule and a fine pencil draw horizontal lines that will touch the tops and bottoms of the bodies of the letters, lines that touch the tops and bottoms of the tailed and topped letters, and vertical lines that follow the shanks of every topped or tailed letter, including the capitals. The gauge, when completed, will represent a framework fitting the signature, and its use is twofold. It helps the eye to detect the variations in the general contour of the signature, and, when placed over another, brings out the points of difference. Due allowance must be made for proportion. It is obvious that the distance of letters will be greater in a signature written larger than another, but the proportionate distances will be preserved. The difference in the size of a letter is not very important, except that it offers more scope for examination. For example, a looped *l* may be very small or half an inch long; but, if made by the same writer, the proportionate width at top, bottom and middle will be preserved, and compare with the same measurements in the smaller letter. Signatures of the same writer do not often vary much in size, though they may be thicker or finer according to the character of the pen used; but observation will show that the difference in a handwriting caused by the use of different pens is much more imaginary than real.

The traced signature is produced by placing the paper over the genuine autograph, holding it to the light, generally on a sheet of glass, and tracing it with a fine point. Such forgeries are often more easily detected than the copied signature, for the reason that signs of the tracing process can generally be found by careful examination. The fine, hard point used to trace the autograph leaves a smooth hollow, which can be seen through the glass on examining the back

of the cheque or document. If the paper be held in a line with the eye in a strong light, the ridge will be more clearly perceived. The difference between a mark made by a hard point and a pen can be tested by experiment. The hard point must of necessity be pressed with a degree of force to make the desired impression on the paper, and the result is a smooth hollow. But if a pen be pressed hard, it produces two parallel lines, and, instead of a hollow, a ridge is formed between the parallels. Of course, it will be so slight as to be hardly perceptible, except through a strong glass, but it will be there nevertheless, and knowing what to look for, the expert will generally have no difficulty in satisfying himself whether the forgery has been traced or copied, a very valuable piece of evidence when once settled, for it is within the bounds of probability that the genuine signature from which the tracing was made may be discovered. It is possible, and has often occurred, that the writer of the original may have some recollection of having written to the suspected person, or in many ways a clue may be suggested. There is a well-known case of a forgery being brought home to the perpetrator through the accuracy of the tracing. It is a fact easily proved, that no man can write a word twice, so exactly, that if the two are overlaid they fit. If two such signatures be produced, it is safe to assume that one has been traced or otherwise mechanically produced. In the case mentioned a signature on a cheque was pronounced a forgery by the person supposed to have signed it. In examining specimens of the genuine autograph, the experts came upon one which, when placed upon that on the cheque, proved a perfect replica, down to the most minute detail, showing beyond question that it had been used to trace the forgery from. It was further proved that the original had been in the possession of the supposed forger, and the jury were asked to decide whether it was probable that a man could reproduce his signature in exact facsimile after a lapse of time, and without the original before him. As the chances against such a contingency are many millions to one—a fact the student can verify—the jury decided against the forger.

At the risk of appearing tautological to a tiresome degree it is necessary to accentuate the fact that the comparison of

handwriting, and more particularly of signatures, is essentially dependent on cultivating the faculty of observation. This art cannot be taught; it can only be acquired by practice and experience, like swimming or riding. The teacher can at most indicate the method of study and some of the leading principles of conducting an investigation. Most men are not naturally observant, and the habit can be best fostered by having an object; but when once a person has been taught what to look for he almost instinctively notices details that previously never struck him. This is specially true of the study of handwriting.

The best method of practice that can be adopted by the student is to begin by making a careful study of his own signature and writing. He will be surprised at the number of facts hitherto unsuspected that will be revealed to him. The value of using his own handwriting as a subject of examination lies in this, that the student can satisfy himself how and why certain strokes are made. This he can only guess at in the writing of others.

The preliminary exercise should consist in studying the effect produced by the different methods of holding the pen. The signature supplies excellent material for this class of practice. Begin by holding the pen with the top end pointed well towards the left shoulder, in the absurd and unnatural position taught by the old school of writing masters. Repeat the signature with the pen held a trifle less acutely angular, and go on till six or eight signatures have been written at a decreasing angle—until the top of the penholder points well to the right, producing what is known as a backhand. The effect of these angles must be carefully noted, and in a short time it will be found possible to arrive at a very accurate opinion as to how the writer of a particular signature habitually holds his pen—an important and valuable piece of knowledge. The practice should be extended to long sentences, and a frequent repetition of all the letters, capital and small, the magnifying glass being always used to examine the effect of the various and varying strokes.

In examining a signature for comparing it with a suspected forgery it should be copied very frequently, as the clues and suggestions the experiments will produce are of

much greater service than will at first appear, and of more practical value than pages of theory, as the how and why will be revealed for much that would be obscure without this assistance. As experience grows, it will not be necessary to adopt this copying process so often, for the eye soon becomes alert at detecting slight shades of difference in strokes, and a glance will convey more than could be explained in many pages.

CHAPTER XVI.

THE EXPERT IN THE WITNESS-BOX.

WHEN the expert has been called upon to give an opinion upon the genuineness of writings he embodies his conclusions in a report of which the following may be taken as a fair example:—

To the Chief of Police.

SIR,

REX *versus* JONES.

In accordance with your instructions dated — I beg leave to inform you that I have made a careful examination of the document marked *A*, and attached hereto, and compared it with the documents marked *B*, *C*, *D*, *E* and *F*, also attached.

I have arrived at the conclusion that the document *A* was written by the same hand as produced *B*, *C*, *D*, *E* and *F*.

The main reasons which have led me to form this opinion are these:—

First, although the writing in *A* bears at first sight no resemblance to that of the other documents, the difference is only such as experience leads me to expect in a writing which has been purposely disguised, as I believe this has been.

The writing on the four documents *B* to *F* I take to be the normal hand of the author, and that on *A* to be the same writer's hand altered so as to present a different appearance. I will call the specimens *B* to *F* the genuine examples, and *A* the disguised.

Experience shows that the person who writes an anonymous letter generally seeks to disguise his hand by departing as much as he deems possible from his normal writing. The usual hand of the writer of the genuine

document is a free rounded hand sloping upwards towards the right. The writing of *A* presents exactly the features I would expect to find when, as appears to be the case here, the writer has adopted the familiar trick of sloping his writing in a direction opposite to his normal hand. While the result of this change is to alter the apparent style and general appearance of the writing, the alteration does not extend to certain tricks and characteristics which are plainly obvious in the genuine letters and are repeated in the anonymous letter *A*.

The writing in the genuine letters contains fourteen very distinctive peculiarities, or tricks of hand, which I find repeated in the anonymous letter *A*.

(Here describe them, as for example.)

1. The figure 4 in the dates is always made like the print form of that figure.
2. The small *e* is always of the Greek form.
3. The small *t* is always crossed by a bar thick at the beginning, tapering to a point, with its longest part behind the shank of the *t* [and so on].

The various points of resemblance are set out in detail, a separate paragraph for each, and each paragraph numbered.

It is extremely important that a report should be fully descriptive and written in plain, non-technical language, easily understood by the jury, who will have to decide whether the resemblance has been made out.

Too many handwriting experts spoil the effect of their evidence by employing technical language and presuming on the part of the jury an acquaintance with the methods of comparing handwritings.

Do not be satisfied by saying that certain letters resemble each other. Show by an enlarged diagram how and where, indicating the parts to which attention is called by arrows. Place the single letters to be compared in parallel columns, headed with the alphabetical letter distinguishing the document in which the particular letter occurs. Use foolscap paper, and write on one side of the paper only.

The usual method of dealing with the handwriting expert in the witness-box is shown in the following extract from a report of an actual case.

Mr. D. B—— was called by counsel for the prosecution and duly sworn.

Q.—You have had considerable experience in examining handwriting.

A.—Over twenty years.

Q.—Look at these documents. (Hands documents to witness.) Have you seen and examined these?

A.—I have.

Q.—Have you formed any opinion upon them?

A.—I have, and have prepared a report.

In some cases the expert is allowed to read his report in full. In others he is requested to give a verbal report, but if the point be insisted upon, the judge generally permits the report to be read, either by the expert or by counsel. A copy of the report, together with the documents in dispute are then usually handed to the jury for examination. The expert may proceed to illustrate his point with the aid of a blackboard and chalk, but much depends upon the attitude taken by the judge and counsel. Some judges insist that the expert shall confine himself to expressing his opinion, leaving counsel to deal with the explanation and comparison; others give the expert every opportunity of showing how he has arrived at his opinions.

The examination in chief is usually a very simple matter. The trouble for the expert begins when counsel for the other side gets up to cross-examine.

In nearly every case the object of the cross-examining counsel is to ridicule the art and get the expert to admit the possibility of other writers possessing the same peculiarities which are said to distinguish the letters before the Court.

Counsel's favourite trick is to select some letter and ask the expert if he is prepared to swear that he has never seen something just like it in some other person's writing. The expert who knows his business will insist on keeping well to the front the bedrock basis of handwriting comparison, which is the application of the law of probability to cumulative evidence. It is not a question whether some other person may be in the habit of making a *t* or a *k* similar to those cited as evidences of common origin, but whether it is probable that two persons should make a dozen or more letters in

precisely the same way under similar conditions and exhibit precisely the same peculiarities of style. He should reply with the unanswerable postulate that millions of persons possess red hair, snub noses, a scar on the face, blue eyes, bent fingers and a stammer ; but it is millions to one, against any two persons possessing all six of those peculiarities.

In the course of his replies the expert may justifiably help his own case by repeating, when opportunity occurs, such irrefutable axioms as, No writer can say off-hand what peculiarities he may exhibit ; that there are scores of ways of dotting an *i*, or crossing a *t*, and that few persons know which form they mostly affect. Fifty such points may be gathered from this little volume alone, while acquaintance with the works of other writers on caligraphy will supply ample ammunition for meeting and repelling the customary form of attack on the handwriting expert.

Another method of discrediting a witness is to remind him that experts have differed, the Dreyfus case being usually cited. The answer is obvious. First it is essential to be assured that those experts were all competent, for there are degrees of competency in judging handwriting as in every other subject on which opinion may be called. It is a notorious fact that in the Dreyfus case the most competent experts testified that the Henry letters were forgeries, the authorities called on the other side being in most cases unknown men or amateurs of no standing. A number of these self-styled experts possessed no other qualification than presumed familiarity with the handwriting of Dreyfus. It is also worthy of note that several of the experts on both sides proved most inefficient witnesses, obscuring their explanations by the employment of technical phraseology which conveyed little meaning to the lay mind.

Exactitude and regularity in the choice of the words used in describing the parts of letters should be strictly observed by the student. The rules given in the chapter on "Terminology" should be mastered and adhered to. In most cases the terms there applied to letter-analysis will be found to be self-explanatory.

CHAPTER XVII.

HANDWRITING AND EXPRESSION.

NO work dealing with the study of handwriting would be complete unless it recognised that phase of it which touches on the delineation of character by an examination of the caligraphy.

That many valuable clues can be picked up by the expert who applies the principles on which the graphologist works is indisputable, nor is it necessary to accept all the theories claimed as reliable by those who practice this interesting branch of the art of writing-analysis.

There is no doubt that many persons have attained a remarkable degree of proficiency in deducing from the hand-gestures of an unknown person a very accurate estimate of his or her character, and this fact should prove that the principles of the art of graphology are based on scientific grounds, or at least that the rules on which the student works are regular and not, as some suggest, mere guess-work or coincidence.

The elder d'Israeli, in his fascinating work, the "Curiosities of Literature," devotes considerable space to the subject. Among other things, he says:—

"Assuredly nature would prompt every individual to have a distinct sort of writing, as she has given a peculiar countenance, a voice, and a manner. The flexibility of the muscles differs with every individual, and the hand will follow the direction of the thoughts, and the emotions and the habits of the writers.

"The phlegmatic will portray his words with signs of labour and deliberation, while the playful haste of the volatile will scarcely sketch them; the slovenly will blot and efface and scrawl, while the neat and orderly-minded will view themselves in the paper before their eyes. The merchant's clerk will not write like the lawyer or the poet.

“ Even nations are distinguished by their writing; the
 “ vivacity and variableness of the Frenchman, and the
 “ delicacy and suppleness of the Italian, are perceptibly
 “ distinct from the slowness and strength of pen discoverable
 “ in the phlegmatic German, Dane, and Swede.

“ When we are in grief we do not write as we should in
 “ joy. The elegant and correct mind, which has acquired
 “ the fortunate habit of a fixity of attention, will write with
 “ scarcely an erasure on the page, as Fenelon and Gibbon;
 “ while we find in Pope’s manuscripts the perpetual struggle
 “ of correction, and the eager and rapid interlineations
 “ struck off in heat. Lavater’s notion of handwriting is by
 “ no means chimerical; nor was General Paoli fanciful when
 “ he told Mr. Northcote he had decided on the character and
 “ disposition of a man from his letters and the handwriting.

“ Long before the days of Lavater, Shenstone in one of
 “ his letters said, ‘ I want to see Mrs. Jago’s writing that I
 “ may judge of her temper.’

“ One great truth must, however, be conceded to the
 “ opponents of the physiognomy of handwriting. General
 “ rules only can be laid down. Yet the vital principle must
 “ be true that the handwriting bears an analogy to the
 “ character of the writer, as all voluntary actions are
 “ characteristic of the individual.”

Professor Foli, in his very useful work, “ Handwriting as
 an Index to Character ” (London: C. A. Pearson, Ltd.), says:

“ The changes which handwriting undergoes as maturity
 “ is reached prove how directly it is influenced by the nervous
 “ condition of the writer.

“ The writing proper to childhood is large, round and
 “ accompanied by a laboured pen movement; whereas that
 “ which is normal as manhood or womanhood is attained is
 “ smaller, and turned off by a more rapid and fluent motion of
 “ the hand.

“ Illness, again, affects the writing. As the hand is
 “ charged with more or less of the nerve fluid, so the writing
 “ is stronger or weaker, firmer or feebler, as the case may be.

“ This goes to show the important influence which the
 “ nerve current exerts in fashioning the handwriting. Small

“ wonder that our handwriting alters day by day. Yet it does not alter either. So far as its general appearance is concerned I grant it *seems* to do so. But look at the really significant points of the writing written at different times. Give a glance at the height at which the “ *i* ” is dotted, the way in which the “ *t* ” is barred, the manner in which the letters are, or are not, connected and finished off. These things will crop up with unerring uniformity time after time.

“ You do, of course, get a studied handwriting now and then, just as you sometimes meet with a formed facial expression. But that does not express the true character, simply because the control over the feelings or the power of disguising what is felt is a salient point in the character; and this very fact will serve to show that there is truth in graphology.

“ That the pen, whether it be a fine or a broad pointed nib, plays a certain part in determining the thickness or thinness of the strokes, I am willing to allow, but here again we have no argument against graphology, for most people have their favourite nib—just as they prefer one occupation to another—and this is the one which will best serve to define their characteristics. The same with the surface of the paper upon which they write; some will select a smooth, others a rough kind, but whatever that may be which is adopted with comfort, it will be typical of the writer.”

The following are some of the more marked signs of the character they indicate. For a fuller exposition of their application it would be well to study the work of Foli, before mentioned, and of Rosa Baughan (Upcott Gill, London, 2s. 6d.), with the scholarly work of J. Crépieux-Jainin, entitled, “ Hand-writing and Expression,” translated by J. Holt Schooling.

General Characteristic.—The fineness of an organism will be revealed by a fine light penstroke. Coarse, low natures make heavy blurred entangled lines.

Activity is denoted by the length of the letters. Where it is feeble the letters will be widely spaced and rounded.

Excitability is shown by sharp strokes and stops. The more acute and irregular the pen-strokes the greater the intensity of feeling.

Aggression, which is the inclination to attack, the destructive force, is indicated by the final strokes of letters and the cross-bars of *t*'s advancing well forward, the dots of the *i*'s placed well forward. In such a word as "time" the dot would probably be between the *m* and *e*. The style is angular and well and evenly spaced, altogether a forward, "go-ahead" writing.

Economy, or acquisitiveness, is shown by the finishing strokes being turned backwards, and inwards; by a cramped hand, a disposition to curtail strokes, particularly the endings of letters, as if the expenditure of ink was begrudged.

Secretiveness, or extra caution, has its sign in the narrow, tightly-closed form of the body of the letters *a*, *d*, *g*, *o*, *q*, the *a* and *o* often being merely a narrow *v*. The general tendency of the writing is to compression, the final strokes being very short. When very marked, the letters dwindle into an indistinct unformed condition. The substitution of dashes for punctuation is another symptom.

Insincerity.—Beware of the man or woman whose writing is a fine, wavy line, upright, with short, stumpy and indistinct tops and tails, words running at their end to an almost straight line, the letters merely indicated. The flatter, finer and more perpendicular this writing, the greater the insincerity. Such a writer would probably be a polite, pleasing and plausible person, but double-faced as Janus.

Love of praise, glory, ambition are shown by a tendency to write upwards, the lines of writing trending towards the right-hand corner of the paper. The signature will usually have a curved line below it, with a degree of flourish.

Self-esteem, to which is allied conceit and ostentation, shows itself in proportion to the size of the writing, the taller and more flourished the upstrokes and the longer the downstrokes, the greater the self-assertiveness. The flourish beneath the signature will be very pronounced, often an elaborate spider's web of interlaced lines. The writing is more or less angular with the finals turned backwards and inwards.

Will power is shown by firm bars to the *t*, with a tendency to descend from left to right, bludgeon-like downstrokes to tailed letters, writing rather angular than rounded, and the

final strokes finished by a heavy pressure. Straight, firm, downward strokes take the place of the tails to *y, g, f, q*.

Sympathy, good nature, kindness of heart are shown by a flowing open hand, the finals of the letters being extended and thrown out with an expansive movement. The tailed letters are long and looped, and often turned up the right side of the letter. The letters are well apart but not necessarily unconnected, and the style is curved. As a general rule hard matter-of-fact natures incline to an angular style; the artistic and softer nature affects rounded, gracefully curved strokes, and avoids straight perpendiculars or horizontals.

Constructiveness, which implies the ability to combine and connect words and phrases, is shown by joining the words together, several being written without lifting the pen from the paper. The more simple and ingenuous the method of attaching the words, the greater will be the ability. When this joining of words is carried to extremes, it may be taken as a sign of good deductive judgment.

Observation, by which is implied the keen, penetrating, inquiring mind (which in excess becomes curiosity), is marked by angularity of the strokes and finals; a small, generally neat, handwriting, with the letters disconnected.

Punctuation affords a very valuable clue to character-reading, for reasons set out in the chapter "How to Study a Handwriting." They are the most mechanical and unpremeditated of hand-gestures, and are, therefore, the more valuable.

When, for example, a dot is thick and heavy, we infer that the pen has been driven across the paper with a strong, decided movement of the hand, which would be consistent with extreme energy and will power; whereas, when the dot is light and faintly indicated we may be certain that only a moderate force has been expended upon its production, which would be compatible with less resistance and endurance in the character.

Again, a dot whose outlines were blurred would show a certain sensuousness of character—strong passions and a want of restraint over the lower propensities; whereas, a dot whose edges were sharply defined would tell of refinement and a loathing against all that was coarse or vulgar.

Careful attention to punctuation indicates neatness, order, method and love of arrangement; nor is it necessary that the punctuation should be strictly correct, for the art is but imperfectly mastered by most people, even the best educated.

Stops that partake of the appearance of a comma indicate a degree of impetuosity; well rounded stops imply calmness and tranquility of temperament. When the full stops are fashioned after the form of a comma and droop towards the right hand they indicate a tendency to sulkiness. When they are merely angular we may infer impatience and a "peppery" disposition.

Flourishes are always indicative of a certain amount of assertiveness. The simpler the flourish the less artificial this self-insistence; the more elaborate, the greater the desire to seem what one is not.

BIBLIOGRAPHY OF HANDWRITING.

MOST of the works in this list relate to that aspect of the study of graphology which is supposed to bear upon the manifestations of character. But there is not one which the student of handwriting can afford to ignore, since, apart from the debatable question of character reading, they all contain numerous hints and observations of extreme value to the student whose objective is the acquisition of aptitude in the more practical art of detecting forgery.

AUTOGRAPH COLLECTING: A practical manual for Amateurs and Historical Students. By HENRY T. SCOTT, M.D. London: Upcott Gill. Price 5s.

A GUIDE TO THE COLLECTION OF HISTORICAL DOCUMENTS, LITERARY MSS. AND AUTOGRAPH LETTERS, &c. By Rev. H. T. SCOTT and SAMUEL DAVEY. (Out of print.) May be seen in British Museum and many public libraries.

THE AUTOGRAPHIC MIRROR: A monthly journal now defunct, but procurable at second hand.

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HOW TO READ CHARACTER IN HANDWRITING. By HENRY FRITH. Ward Lock. Price 1s.

HANDWRITING AS AN INDEX TO CHARACTER. By Professor FOLI. C. A. Pearson. Price 1s.

A SYSTEM OF GRAPHOLOGY. By the ABBÉ MICHON. In French; no English translation. A valuable work.

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THE HANDWRITING OF THE FRENCH PEOPLE SINCE THE MERORINGIAN EPOCH. Same Author.

LES MYSTÈRES DE L'ÉCRITURE. Preface by Desbarrolles. Same Author.

THE HANDWRITING OF JUNIUS PROFESSIONALLY EXAMINED BY CHABOT. Edited by the Hon. E. TWISTLETON. John Murray. 1871.

This work is the only one hitherto published in England explaining the methods of the handwriting expert. Mons. Chabot, for many years the leading English expert, was commissioned by Mr. Twistleton to examine the handwriting of "Junius" with a view to deciding the authorship of the famous letters. The result was an exhaustive volume in which the process of handwriting analysis is illustrated by thousands of examples. The conclusion arrived at was that the writer of the "Junius" letters was Sir Philip Francis.

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